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PAPERS READ BEFORE THE SOCIETY.

1925-1926.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C.1, on November 2nd, 1925, at 8 p.m.*

I.—THE ISSUE BETWEEN MONISM AND PLURALISM.

THE PRESIDENTIAL ADDRESS.

By J. A. SMITH.

OF all the many lines of cleavage that divide thinking minds from one another scarcely any seems to go so deep, or to separate them with so impassable a chasm, as that which, when it reveals itself in philosophy, leads us to classify and range philosophers as being either Monists or Pluralists or, as I would venture to designate them, Unitarians and Multitudinarians. As it appears there, it looks like the magnification of some primordial difference of type between minds which have in their philosophies but written large what was already present in their several natural constitutions, each type following out its original bias and ever diverging more and more widely from the other. Each seems to begin with a way of seeing or looking different from the other—a different outlook upon, or intuition of, what is believed to be the same for both, defining or articulating that into a system of thoughts and so fixing it until the alternative view is excluded

and the possibility of entertaining it is inhibited. Thus the hope of mutual or common understanding is discouraged or finally cut off ; each party shuts itself up within its own closed system, inter-communication even in the form of controversy appears to be inept, and its surcease is welcomed or acquiesced in as the dictate of wisdom. The last words of each to the other are " You that way, we this way."

This result of our endeavours to think would be a sufficiently sad one, even if it meant no more than an increasing divergence in opinions and beliefs. But, in fact, it is very much more than that. By it we are sundered from one another not only in intellect or thought but also in feeling and in action. In our several philosophic systems we at once reflect and foster a deeper divergence of interests and aspirations, of present concerns, or future hopes and fears. We fall in every direction further apart from one another, out of sympathy and beyond co-operation. We are increasingly divided from one another in theory and practice alike, are loosened and disjointed in economics, politics, morals and religion. Nor is the situation bettered but rather worsened by the congregation of the dissidents into two loosely compacted parties or camps, whose only intercourse with one another takes the form of a vain warfare of words conducted in mutually unintelligible language.

There are those who, while they will perhaps admit that the course of human development, and especially of human thought, has run in this way and towards this end will find in it nothing deplorable. They will see in it a manifestation of the richness and fecundity of Nature (or of Man's nature), and will even rejoice in the spectacle of its prodigal variety or diversity. They will welcome the multiplication of diversities to engage attention, even at the risk or cost of distraction, and the constant variation of situations to call forth modifications in the exercise of active powers, although, or even because, these beget further and deeper

antagonisms. For all that they are content to accept what seems to them the essential character or inevitable outcome of the state of affairs into which they are born and of which they form similarly charactered or similarly fortunèd parts.

I do not say that such are wrong. But in the controversy which I here have in mind they are but parties. They are indeed just those natural Pluralists or Multitudinarians of whom I have spoken, and their acquiescence or contentment or welcome is but evidence of a peculiar temperament, a private bias of nature, the result, it may be, of fortune or favouritism. The question at issue is whether from such a partial point of view they are entitled to pronounce for others as well as for themselves upon the real and total character of what is alike for these others and for themselves one and the same state of affairs—the really real situation surrounding and including all selves.

There is no question as to the right of their intuition to a hearing in the controversy. If such is the impression made upon them so it is, and it is well that that impression should be expressed as freely and sincerely as possible : we cannot have too much evidence concerning what has been or is experienced. And if by it, when so expressed, their hearts are warmed and their wills invigorated, of that also it is well that we should be fully and accurately informed. Further, if their “ philosophies ” are, or are intended as, the most complete or systematic expressions of their original impressions, the more of such philosophies there are the better. But I repeat that all such contributions are nothing but testimony, to be weighed in coming to a decision upon an issue which they must not be suffered to prejudice. They are only expressions of an impression which may be to an incalculable extent erroneous or perverse. All we can ask or expect of their authors is sincerity, and for the ulterior use of them as testimony sincerity, though indispensable, is not enough. The evidence they supply is at best in every sense

of the word "partial," with a partiality that no sincerity or candour can by itself remedy. The witnesses must not be permitted to usurp the functions of the judge, upon the nature of whose impartiality it may be necessary afterwards to dilate. But I hasten to add that the witnesses on the other part are precisely in the same case. They, too, are what the French call *témoins d'impression*. They also voice their impressions, are rival expressers of rival impressions or intuitions—a fact they are far too apt to forget or ignore. Neither can rightly claim any presumption in favour of his side of the case ; on each side the *onus probandi* presses with equal weight.

It might appear to some of those whom I regard as my nearest colleagues and habitual allies that I here concede too much. They will perhaps be disposed to urge that *a priori*—i.e., before the actual issue is joined—there is a presumption, and that in favour of the monistic hypothesis. If we philosophize at all, so they will say, or even if we believe that philosophy is possible, we commit ourselves from the outset to the assumption that what we philosophize upon or about is in itself one, a Universe. They may even add that to refuse to philosophize, or to deny the possibility of philosophy, is still to philosophize and to profess a philosophy, and so to make this assumption. They claim to impale their opponents on the horns of a dilemma, and to nonsuit them before trial. The unitarian doctrine is indeed an assumption, but it is an assumption unconditionally or absolutely necessary, inevitably and universally made. We—all of us—make and hold to or rest upon it : it is the common ground upon which both—and all—parties stand, and lies outside or beyond dispute. The impression of unity is made on all, and in it the character of the Whole is stamped upon and conveyed to us as it is, doubts of it being merely verbal or a *flatus vocis*. To be is to be one, and we can regard naught as really real which is devoid of unity. The study of the history of philosophy appears to

confirm this judgment. It is the record of the continued search for a unity which is always assumed or presumed to be already there. All disputes turn upon the kind of it or the manner of its existence—not upon its presence or absence. Is the unity, men have asked themselves, a oneness of stuff, matter, substance, or a oneness of form, principle, plan, etc. ? Does it consist in a singleness of origin or of present nature or of ultimate destination ? Is it conscious (or even self-conscious) or, on the other hand, is it blind to itself, or, again, does it subsist in some intermediate condition ? These are the sort of questions that divide men who attempt in their philosophies to express their abiding sense of its presence and reality, but they so diverge because they are at one in acknowledging that *somehow* what they labour to characterize is indubitably one.

Nevertheless, all this is still but an impression and an assumption—an impression made by the circumpressure of the environment upon the plastic matter of our minds with various degrees of force and fixity or persistence, and an assumption trusted beyond the scope of its immediate and irresistible evidence. For all its plausibility its range may be more limited than we are disposed to believe : there may be regions or levels in what truly and really is which are not unified internally or with one another or with what clearly is unified. There may be, to use a word of William James, “ multiverses,” in which case what is may be composed of a universe and multiverses or of universes and multiverses, and so itself be not a Universe but a Multiverse. Further, it may be that Mind (or a mind) is a universe, which perforce reads everything as made after its own pattern, inevitably attributing to the real its own unified or unitary nature. Or perhaps there are some minds that do this and some that do not, or again some that swing and oscillate between the one mood and the other, none being able to do more than express its different or shifting impressions. And once that desperate doubt is

suggested, the appeal to the lessons to be drawn from the study of the history of philosophy is seen to be double-edged. The traditional Monism of philosophy may be but a hastily accepted and intolerantly imposed orthodoxy, wilfully closing its eyes and stopping its ears to inconvenient counter-evidence. Or again, in gross and in detail—so far as it ventures in application of its principle to certain grand provinces of being—it may owe its real or apparent success to the luck of a working hypothesis. From this point of view the impressiveness of the results due to a monotheistic or a pantheistic interpretation of religious experience or to the doctrines of (say) the homogeneity of matter (or of space-time) or that in ethics of the singleness or simplicity of the moral principle or that of the unity of history may be no more than evidences of the ingenuity of the mind in inventing devices to facilitate the discharge of some self-imposed task. important to it but without ulterior significance. No, I think I must in wisdom persist in regarding all such adduced facts as expressions, whether in philosophies or out of them, confined to the rôle of evidence, as testimony, partial, one-sided and incomplete. The line between orthodoxy and heresy may be drawn where we will, but the testimony of the heretics must be received along with that of the orthodox, *sine ira et studio*, and each must be weighed impartially with the other.

So far it would appear that we are all—all without exception—in this debate parties and partisans, witnesses who, no matter what our sincerity, are partial and biassed. And, it may be asked, if this be so, *quis judicabit?* The jurisdiction of the philosopher has been declined: he has been deposed from the bench and bidden to take his place at the bar or on the witness-stand. It is idle to refer the issue to the judgment of God or to the verdict of History. What we demand and need is an earthly or human and a present-day tribunal, and for this the judge and jury must be drawn from among our present selves. Unless the

issue is for ever to remain open we must double the parts of witnesses and judges or jurymen. To do this we must ourselves make the passage from partiality to impartiality. This we can do, or as good as do, by discovering and acknowledging, and in the end allowing for or discounting, the several biasses from which as witnesses we suffer : so from the level of counter errors we may rise to the truth, each for himself and each for and with all. Or rather, I perhaps should say, we shall reach not the truth, but the greatest wisdom in the matter possible or competent to us—even if it be the better but salutary wisdom that the truth lies for ever beyond our grasp. For the deliverance of the court may be “*Non liquet*.”

In the process of litigation there is no step or stage more important than what is called the settlement or adjustment of the issue. What is the issue here ? That here there is some determinate or determinable question at issue is surely obvious. Whatever biasses there may originally be, they lead away from common ground towards widely separate positions, and those who are led by them find and feel themselves landed in opposition. As they proceed they waken up to this situation and realize the chasm which yawns and widens impassably between them. There is no secret or mystery about the matter. The problem on which we find ourselves thus in opinion severed is the ancient problem of the One and the Many. It is so ancient that I am glad to be able to quote unchallengeable evidence that it is still modern, still alive, still troubling and urgent. “I suspect,” says my authority, “that in but few of you has this problem occasioned sleepless nights, and I should not be astonished if some of you told me it had never vexed you at all. I myself have come, by long brooding over it, to consider it the most central of all philosophic problems, central because so pregnant. I mean by this that if you know whether a man is a decided monist or a decided pluralist, you perhaps know more about the rest

of his opinions than if you give him any other name ending in *ist*. To believe in the one or in the many, that is the classification with the maximum number of consequences." That is admirably said, and the words are not those of some antiquated Hegelian but those of William James.* I not only endorse them but go further, and say that if a man's decided Monism or decided Pluralism is the sincere and genuine expression of his life, experience, self or personality—and unless it is that it is negligible—it is the best evidence not only what the rest of his *opinions* are, but also of what are his interests, his concerns, his feelings, sentiments, emotions, his desires and aspirations, his aims, purposes and volitions. It is in the position that a man comes to take up in respect of this problem that he most fully expresses—makes clear to himself and others—his whole self as it is in its intrinsic wholeness and in its distinction from each and every other. Will he nill he, to this as the outcome of his natural bent he does and must come.

But what are that decided Monism and that decided Pluralism, that "belief in the one," on the one hand, and that "belief in the many" on the other, which between them in the end, because from the beginning and throughout, so widely and so momentarily divide mankind into two camps? They are beliefs about the whole state of affairs surrounding and including the believers, assertions or statements which ascribe to that, taken in its full extent and without exception or remainder, one or other of two mutually exclusive or incompatible characters. The option between the rival assertions is made in face of an absolute Either-Or, and whichever is chosen is chosen without condition or equivocation. It is this which charges each alternative with such tremendous consequences, consequences *inter alia*, as James says, practical and "to us."

* *Pragmatism*, p. 129.

I do not see how, once this is realised, it is possible with James to suggest that a *via media* can be found or taken. The challenge which is made and accepted is "Under which King, Bezonian, speak or die!" Between Shibboleth and Sibboleth we may not and cannot hesitate. If Pragmatism, or any other ism, abjures both absolute Monism and absolute Pluralism, it declares itself without any decided opinion either way and attempts to rest in indecision—not only in indecision of opinion but in uncertainty of will and instability of feeling, vainly seeking to evade the consequences of decision by never making up its mind. It declines ever to strike a balance, or postpones doing so to the Greek Kalends of some imagined "final empirical ascertainment."* But even so, it confesses its inability to preserve its equipoise. *In via*, while it admits that some day absolute Monism "may turn out to be the most acceptable of hypotheses" (i.e., no *hypothesis* at all, but the unhypothetical fact), meanwhile the opposite hypothesis—which is Pluralism's doctrine—must not only be "sincerely entertained" and "seriously considered," but must be followed. But this, though its direction is opposite to that of absolute Monism, is not absolute Pluralism; it is a blend of that with Monism in indeterminate proportion, a position facing both ways, a course running with the hare and hunting with the hounds.

The decision cannot thus in any way be declined or evaded or postponed. Any such attitude to it is inconsistent with the sincere entertainment or the serious consideration of the great alternatives. We may not know or be able to discover which of the two alternatives is the right one, but either the Whole is one and not many, or many and not one. It is in a manner here idle to remind us of the many senses of "one" and "many": what we have to remember is that the ascription to the universe

* *Id.*, p. 161.

of unity in any sense totally excluded a correlative multiplicity or multitude and *vice versa*, that it is impossible to affirm the one without denying the other, and *vice versa*, to actualize either without destroying the other, or to care for and enjoy the one without detesting and abhorring the other. *Tertium non datur.*

So regarded the choice is absolute, and either alternative so fraught with portentous consequences that it is small wonder if those who make it tend to cover it as it were with a veil. In general the Monist is the more open-eyed and the more courageously resolved to face the facts. But each party endeavours somewhat to soften the rigour of his denial, yet never sufficiently so to soothe the nerves or satisfy the claims of his antagonist. In vain does the Monist offer to concede that multitude is an "aspect" of the one reality, for he means that it is but a show and a seeming, or again to speak of it as "adjectival," for he means that it is not a substantive or substantial character. And in vain does the Pluralist consent to speak of its unity as original or as the final character which some day it may take on, for he means that from the actual it is one eternal or at least a present absentee. Mr. Bradley, speaking of the belief in a plurality of independent beings, declares that it is "no fact, but a theoretical construction; and, so far as it has a meaning, that meaning contradicts itself and issues in chaos. A reality of this kind may safely be taken as unreal." "The plurality sinks to become merely an integral aspect in a single substantial unity, and the reals have vanished." To this the Pluralist may and must retort that it is plurality that is the fact and unity that is the theoretical construction, and that a reality which is one may safely be taken as unreal. The Pluralist as a rule dislikes to be put on the defensive; he represents himself as recoiling not from Monism but from absolute Monism or Absolutism *tout court*. He simply starts with a tentative Pluralism, follows a current, and is anxious to see whither it will carry him. He acknowledges rapids which must be traversed and

sees rocks ahead, but he finds as yet no reason to reverse direction, and is still borne up by the hope that somehow he can reach a place where the stream of Pluralism and the ocean of Monism will peacefully mingle their waters. It is difficult to find "a decided Pluralist" to set in contrast with the classic figure of the decided or absolute Monist of so much modern philosophic literature. If we must deny that the figure of the latter can be regarded as a portrait of Hegel or Bradley or Bosanquet or Royce, these are historical mystics of whom it is no caricature. But from what originals can we draw the counter portrait? Perhaps at best it will be a sort of composite photograph in which all the different hesitations and qualifications of the several Pluralists have been cancelled out. I quote, but without comment, the saying of one of them that it must be allowed that "Pluralism, or as James called it, radical empiricism, cannot furnish, has never attempted to furnish, anything deserving to be called a philosophical justification of itself."* I confess that I do not understand the situation so described. Pluralism is put forward as a doctrine which must be either accepted or rejected—or, it is added, transcended: its acceptance is to preclude Monism (for the epithet "absolute" adds nothing), and this acceptance is based upon either non-philosophical grounds or upon philosophical grounds never furnished or capable of being furnished. The verdict in its favour is claimed upon the principles of some undeclared and otherwise unknown system of jurisprudence. I do not, however, believe that this is meant, and indeed am persuaded that the case for Pluralism can be stated and supported by arguments to which I would not deny a very large measure of philosophical respectability.

I am well aware how remote from common-sense and common experience must appear the high tribunal before which the alternatives are so gauntly or starkly presented, and how rare and to

* Ward, *The Realm of Ends*, p. 200.

most unbreathable is the atmosphere in which the choice between them is supposed to be made. Let us dismiss from our minds the whole picture as the creature of a fanciful metaphysic or eschatology. We must, however, retain it as a figure of speech, by which alone we can define to ourselves the two tendencies or biasses by which our present minds, and also our present hearts and wills, are swayed. For how otherwise can we define or distinguish tendencies except by making as precise as possible to ourselves in advance the ends in the attainment of which they would terminate? Their springs lie close together in our nature, and for a long time their courses keep close together, or cross and recross one another almost indistinguishably: we must travel some distance from their watershed before we are sure that their direction runs contrary the one to the other, and sets them towards flat contradiction. Many of the writers to whom I have alluded as recognising the constantly increasing divergence have traced it back to a primitive difference of natural temperament, to a difference in the admixture of the elements in the make-up of our several natural souls which controls their future development like an innate *δαίμων* or fate. Some of us are born "tender-minded," others "tough-minded," and so some of us are predestined to Monism, others predestined to Pluralism, and no one of us can do more in experiencing or living or thinking or speaking than unwind the roll of his pre-established destiny, keep unwinding it till he is cut off, and so without ever having reached the last chapter which lands him finally in Heaven or Hell. And so in that book we can never read aught but "the page prescribed, our present state." Still, there we can read something of the course and direction of the currents which bear us along, and possibly even from its narrow text frame some conjectures on to their or our futures. To our joint or common enlightenment valuable contributions may be made by sincere and candid autobiographies or confessions.

Here, then, and in this spirit I venture to submit to you a brief record of personal experience. Partly—but in what measure I know not—from a native or inherited temperament, partly from submission to circumstances and neighbours, partly, and at least in the latter stages with increasing deliberateness, I have been led or led myself along the monistic line of development, until now I have reached a point at which I seem irrevocably committed to a monistic Philosophy or Metaphysics, by which I am prepared to stand. It may be that in all this I have over-trusted my temperament or have too readily surrendered myself to the influence of my immediate environment, or again that I am now deceived by the relative intellectual satisfaction which I find in the shaped philosophy which has grown out of my experience, and commends itself to me as fit for general or universal use—as a system of thoughts right and alone right in principle, as a whole and in its main structural lines secured by internal consistency and coherence. Nor has the course of this development been accompanied by a growing satisfaction merely theoretic or intellectual: the world so regarded has been, though not so markedly, a source of increasing enjoyment and increasing strength. To have reached so far is matter to me for an all-round satisfaction and self-congratulation. I feel sure that in this experience I am not alone, but rather seem to myself to be drawn ever closer into fellowship and communion with the elect of mankind—Wisdom's chosen children. Of the journey which I have travelled I find no ground to repent and, ascribing no merit to myself in the choice or following of it, I am thankful to find myself where I now stand. But, while I am still convinced that in this way I have come to behold what is most (or alone) in Reality essential, substantial and enduring or eternal, and beholding to enjoy it and profit by it, to associate myself and live at home with what is universal (most profoundly characteristic of the Universe), I am in still unrepentant retrospect conscious

that the prize has been and cannot but have been bought at a price. The payment of that price is not like the "great sacrifices" of the market: it is a surrender or forfeiture of genuine values which must be foregone—I venture to say, irretrievably foregone. Nothing in the language of some of my habitual allies offends me more than the rhetorical depreciation or nullification of such goods as contingent, trivial, transitory or perishable, for none of these adjectives seem to me to cancel or detract from the genuineness of their worth. Singly or together—with such togetherness as is competent to them—they are part (and how large a part who shall say?) of the wealth of the Universe; to deny them to oneself and to others is to impoverish not only a part but the whole. And of their nature and worth, abundance, prodigality, inexhaustibility or endless and utter multitude, muchness and manyness is the essence.

To pursue the way of Monism is in the first place to withdraw oneself from "the many," to shut oneself up and aloof from the multitude of one's kind, to cloister oneself with an *élite*, to confine one's view to all but the larger features of the "prospect over Being's whole," to sever the links of sympathy and the bonds of co-operation with one's fellows, to rend the holy and tender web of affections and to diminish the occasions and opportunities of mutual helpfulness. The Monist, so it is said—and the charge can scarcely be repelled as unfounded—wilfully closes his eyes to the wealth and splendour and glory of the world, denouncing it as unsubstantial, transitory and delusive pageantry, and with that first hardens his heart and petrifies his feeling, and secondly paralyses his efficiency, so in all ways turning the only food of the soul to dust and ashes. It must be acknowledged that such is the *tendency* of Monism—to starve or quench the springs of interest and to discourage effort: that it is apt to be so the Monist knows from all too bitter experience.

Let me proceed in my confession as "a decided Monist." I note in myself a creeping atrophy in many directions and fields, a special decline of interest in æsthetic and economic experience, a growing lack of enthusiasm for the details of Nature or History or the minute exploration of the one or the other. The records of them seem to me at times a dreary desert of insignificancies, "a tedious tale vexing the dull ears of a drowsy mind." At other times the prodigality of Nature excites in me a kind of revulsion or distaste, or an alarm as with the threat of an inundation in which the mind will founder. Nor does the seeming orderliness to which the sciences labour to reduce the chaos give me either enduring satisfaction or the cheering promise of it. The edifices of the sciences appear to me as transitory structures built on shifting sands, at best temporary inns where no permanent stay is possible, and in their architecture I take no enduring delight. And all this because they are many, manifold, multiple; and what I have inured myself to believe in and hope for and endeavour after is not many but one—one in a sense which excludes multeity or multitudinousness. I wish to make open and plain to you whither and past what I have been or am being carried; what in looking I close my eyes to, what in searching for knowledge I ignore, what in desire I resist, what in feeling I harden my heart against, is what I may call in a word Individuality. Wherever any part, anything less or other than the whole, sets up a claim to stand by itself—*indivisum in se, divisum ab aliis*—I disallow its claim, I oppose its pretensions, I counter its efforts, I deny its worth. Its individuality is mere seeming, a hollow and delusive mask, the word a synonym for futility, worthlessness, insignificance, unreality. Of individuals—of all individuals—I feel bound to say that none is or can be what it seems to be. They are less than nothing and wholly vanity. It is too little to say of them that they are "bubbles on the sea of matter [or spirit] borne," which "rise and fall and

to that sea return," for their happening also is individual and so unreal, and neither it nor they tell us anything of what lies behind their appearance.

Repugnant as this confession may be to you, I expect you to be still more outraged by what may be called an amplification or a specification of it. Whatever scorn we may tolerate in respect of individuality we all claim exemption from it for that form, kind or degree of it which we believe ourselves to enjoy. However, it may stand with the reality of the individual snowflake or the individual flash of lightning or the individual pang of pain we ourselves, we individual centres or nuclei of experience, abide immune and unremoved, certainly real, unquestionably substantial, unconditionally valuable, steadfastly or eternally permanent. This character, this mode of individuality, is what we usually name "Personality." I have no need to remind you how often some of the most ardent Monists have expressly and emphatically excepted persons or personalities from their arguments against Pluralism or Individualism and have allowed or even argued for their privileged position in "Being's whole." For myself, I must avow that I can not only find no intellectually satisfactory grounds for this exception, but that in no sense which I am able to attach to the words "person" or "personal" do I find what is so qualified unconditionally valuable or overwhelmingly attractive. The beings or goods which I here and now characterize as "personal" seem to me often and thereby to contain the seeds of intestine weakness, unworthiness, dissolution and mortality, and by contrast what is impersonal to be more worth caring for and striving after, more deserving to survive and prevail, more likely to be durable or eternal. In a word, "Personality" seems to carry with it limitation and finitude, bonds and restrictions which I would fain see dissolved. Once more, I believe myself in this not be alone or arrested at some low level of experience or reflection. Others have felt and expressed this

distaste for "the personal" in experience, not only the disdain and distaste for mere "personalities" ("I am not one who much or oft delight in personal talk"), but the ultimate and universal *cupio dissolvi*, the longing once for all to rise "seraphically free from taint of personality." Head, heart and will all alike turn to that one which

"Lives through all life, extends through all extent,
Spreads undivided, operates unspent,"

to the desire and hope and conviction that the spectacle of self-contained, isolated and divided persons and personalities is but a veil which misleadingly covers an impersonal reality. There was a time when Coleridge declared that the article of faith "nearest to his heart" was "the absolute impersonality of the Deity," and surely many have felt that the phenomena presented in History by human personality is so inextricably blended of good and evil that the disappearance of it would not itself be an unmingled evil or its certain perpetuity an absolute good. And I cannot accept as the last word of practical wisdom the precept "Be a person and respect others as persons," and so *a fortiori*, as the last word of theoretical wisdom, the doctrine that this programme for action is an *opus operatum*, that Being is focussed once for all into persons, or is circumstantial to personal nuclei. All this for the plain, simple and sufficient reason that Personality spells multiplicity, endless multiplicity within and without, and cannot be without it.

To forget this is possible, and indeed easy, all too easy. But it must not be supposed that, if we forget it, what we dismiss is merely a possibly impossible intellectual satisfaction, and that in return we achieve a compensating reward in emotional tranquillity and practical vigour or efficiency. No, the failure to attain unity beyond, and to the removal of, multiplicity inevitably disturbs and disquiets and distracts, both saddens and weakens.

The presence of multiplicity, even in appearance, is not only a puzzle, but a pain and an evil. Those who hold a brief for it are engaged in the paradoxical and desperate enterprise of maintaining that there is light *in* the utter dark, pleasure *in* pain, good *in* evil, being *in* seeming, reality *in* the unreal, unity within the severed ones and also without and between them all. The attempt is a cause foredoomed to failure ; for so it is not and cannot be—"why then should we deceive ourselves ?"

I cannot avoid the conclusion that the road of Monism is "the pathway to Reality," and that the Monist has been wise to turn his back on Pluralism and to resist all temptations to deviate or retreat and return. But I repeat that the sacrifice is heavy, and the *contemptus mundi* which it necessarily involves difficult to justify even to oneself.

It is time to look at the side of the balance sheet which represents the debit and the loss. There is a word, or a group of related words, which by common consent characterizes the contents of those perpetually filling columns. These words are "experience" and its cognates or derivatives "experiential," "experimental," "empirical," "empiricism." These are the words which the Pluralist habitually employs to designate what he regards as the undubitably real, while the Monist uses them to name what he depreciates, rejects and denies. Both agree that experience, the experiencer or experient, experiencing and what is experienced, are essentially and necessarily plural, manywise, many, *infinities infinita*. The Pluralist claims the verdict on the plea that he accepts the given, the hard or stubborn facts, of experience, and the plea is strong. If we reject their testimony, where else can we go ? If water chokes us, what shall we drink to wash it down ? The Monist must at least admit that the unity of which he speaks lies behind and beyond experience, ahead (it may be) of all possible experience, and that the reality whose essential attribute is unity in every direction outflanks the

perpetually growing and deepening realm of experience. The really real is not and cannot be given in experience and falls at all places and times beyond us—beyond the grasp of our minds, our heart or wills. What we count ourselves to apprehend or comprehend, what we delight in or are pained and grieved by, what we enact, none of it is really real. Surely in this the empiricist and the transcendentalist, the Pluralist and the Monist are at one in teaching that, within and without whatsoever is or can be experienced, there is more that is which is not and cannot be experienced.

To experience is to draw in buckets from the inexhaustible well of Being, and in the drawing—in feeling, seeing, knowing, desiring, willing, in a word, experiencing—what is drawn is transmuted and takes on a character alien to that of the living waters of the reservoir: to experience is to cut off parts from the whole and to disintegrate the parts so taken, to isolate the taker from other takers, to enter upon an endless process of internal fusion of the taker's self—to make many what was, and for all the multiplication or pulverization remains, one. Within experience the unity—and all unity—is destroyed, and while experience continues it is irretrievable: there it cannot be found or established. Neither intellect nor feeling nor action can avail against the boundless encroachment and invasion of multiplicity, variation, instability or changefulness. We are ourselves parts of this; eddies in the stream, distracted fragments torn out of their context, caught in a bacchantic whirl, local and temporary and perishable nuclei, phantasmal pseudo-unities; neither we, nor any things in experience, are what we or they seem to be.

From this dread apocalypse or revelation of the unreality of all matters of experience I am now convinced that there is no escape by way of the doctrine of degrees of truth or reality either in the form of a static hierarchy or stratification of the real or in that of development or evolution from lower to higher. Each

doctrine but surreptitiously reintroduces multiplicity into the unity and simplicity of the Real, and so contradiction and incoherence "staining its white radiance": no one has found or even suggested any reason for its multiplicity of appearance or has had the hardihood to plant all multiplicity within its being. There is no half-way house between saying that the whole is as multiple as it appears to be, and that it is not multiple at all.

At the final pass or last farewell to the world of multitude Mr. Bradley says: "The fact of actual fragmentariness [he might just as well have said "multiplicity"], I admit, I cannot explain. That experience [by which he means the whole of what is] should take place in finite centres, and should wear the form of finite 'this-ness' is in the end inexplicable." I should add "and not only inexplicable, but repugnant and objectionable" - a state of affairs impossible to rest or acquiesce in, to leave alone. "But," Mr. Bradley goes on, "to be inexplicable and to be incompatible are not the same thing." I am afraid that even if we can distinguish we cannot separate. Multiplicity, not *in* appearance but *of* appearances, does seem to be wholly incompatible with unity. If this is "the whole matter (or issue) in a nutshell", as Dr. Ward says it is, the record is closed and the verdict inevitable. That verdict must be for what Dr. Ward calls Singularism, for the sole reality is a unique and absolute Being, which, if possible (and no one pretends to show that unity involves self-contradiction*), must be declared actual and the sole actuality.

* I do not understand on what grounds it is maintained by Dr. Ward (and, according to him, by others along with him) that such a Being is impossible, and therefore not actual, or how, therefore, we are reduced to scepticism, or how, again, we are saved from that by the resolution of the contradictions asserted to inhere in Pluralism, or why, lastly, even if we fail to resolve these contradictions, we still may and ought to prefer to Singularism some other doctrine. I am more than doubtful about the claim made for the latter that it "systematises more," and still more about the claim that it "disappoints less."

To such a Being, and to such a Being alone, can there be ascribed individuality, and that individuality in the literal sense of the word—*i.e.*, indivisibility or undividedness, both within itself and as regards any possible or impossible other.

If this verdict stands, it certainly precludes the attribution to the Absolute of personality in any sense in which it characterizes or belongs to our empirical selves : it rules out as indefensible the assertions or beliefs that its constitution is that of a society of persons with or without attachments or circumstances or relations personalized by contact with them. Such a society is not really real, and is not the best or worthiest that can be. If History—Divine or Human—presupposes such a society, then, while it is experience, it is not the whole or the only or the real Reality : it is a story parts of which we can construe in terms of other parts or in its own terms, but one *the* sense of which lies beyond us. Why it should seem to be, or seem to be thus and not otherwise, we cannot discover, and the same or more so is the case with natural History, or the history of Nature.

But, it may be asked, even if this be so and certain beyond all doubt, what to us here and now, to us *ephemeri* prisoned in the confines of experience, shaken with surmises and hopes and fears, is the profit of recalling and dwelling upon it—that way surely madness lies. No, it seems to me rather a healthful reminder of the condition of sanity or wisdom. It is well to be perpetually reminded that no amount of intelligibility, or of beauty or of goodness, of loneliness or loveliness or sanctity, is a guarantee of permanence, still less of eternity. No selective attention or exclusive affection or concentrated volition can, however they generate objects of experience, create real and eternal individuals, or realities at all. The far-off transcendental, transexperiential Unity begets in us yearnings, “immortal longings,” to find and behold and comprehend and enjoy and enact, not simulacra of it but it itself. These longings cannot in experience, or by any of its

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contents or objects, be satisfied, but they are inextinguishable, and supply the motive power and guidance to the whole course of experience. Unity draws us on in experience by its absence from it, and the course of experience is the exposure of its own insufficiency, unsatisfactoriness, futility, vanity, unworth and unreality. In experience *tout passe, tout casse, tout lasse*.

I am well aware how dull, dreary and disheartening a prospect this will seem to most to open out before us. I will no longer plead that *Ha sui diletti il vero ancor che triste*, or that though the full fruition of victory may be eternally denied to us, the duty of still battling in the lost cause remains. But rather I will remind you how Hume found himself "affrighted and confounded with that forlorn solitude in which I am placed by my philosophy, and fancy myself some strange, uncouth monster who, not being able to mingle and unite in society, has been expelled all human commerce and left utterly abandoned and desolate"; how he attempted to diagnose his disease as the result of "a strong propensity to consider objects strongly in that view"; how—seriously or ironically—he proposed to submit himself to the *vis medicatrix naturæ* in the way of "relaxing this bent of mind or by some avocation and lively impression of my senses," and how, nevertheless, he *felt* that, by such a submission and surrender, he would be beguiled to the very heart of loss. In a lighter vein I would recall to your memories the entertaining case of Dr. Johnson's college friend who had aspired to be a philosopher but had found "cheerfulness always breaking in." The Pluralist is a cheerful soul, with lively interests, responsive affections, alert and vigorous tendencies to action, and he is present not only in numbers around us, but multitudinously within each of us, pleading *in foro interiori* the case for multiplicity and variety. I assure you that I am not deaf to such eloquent advocacy, though I could wish that it were somewhat less voluble and vociferous. Sometimes, too, I can scarcely hear the argument

because of the deafening accompaniment of applause. But I firmly believe that there is a good plea, though not the better or the best, for Pluralism.

In this tolerant or expectant or deliberately impartial mood I should like to say where to me lies its main strength or chief colour of plausibility. It is not in the appeal to make the world of philosophy "safe for democracy," to establish and consolidate the claim of human personalities to a secure footing in the real, still less to proclaim them the cardinal points on which all else turns. I desire to see defended a more radical individualism than that, one of the emergence of which I see growing signs in contemporary thought, a thorough-going advocacy of the claims of the empirical individual *as such* to stand firmly and solidly as the assured matter or stuff of the absolute reality, physical atom, quantum of energy, point-event, thrill of pleasure, stab of pain, flash of the will that can. I would have the Pluralist take his courage in his hands, and put the case for the worth and reality of the individual *as such*, in his concentration or condensation within his narrow room and in his isolation from all other individuals. Who will undertake the defence of what is this—here now—mine, or, undertaking it, will engage never to compromise or give it away in detail? The nearest to the fulfilment of what I demand comes at present from one to whom in my Monism I find myself otherwise closest, though not, I confess, wholly at one. Croce is, on one side of him, the most thorough-going of Pluralists or Empiricists. Against the absorption of the individual and the many in the all-devouring maw of Universalism or Monism he carries on a ceaseless polemic in favour of the "spirituality" (which is his word for the worth and the reality) of the merely beautiful and the merely useful individual—for all that theoretically or practically is unique and isolated, self-enclosed and exclusive of all (actual or possible) other similarly self-enclosed and exclusive entities, unprecedented,

unparalleled, unrepeatable. His *Æsthetic* is far more than a theory of Art, his *Economic* far more than a theory of the Business World. Each separately and both together supply the best extant vindication of the claims of Individuality to maintain its place not only in experience but in the world of the Spirit, which is the sole and whole Reality. I commend his doctrine to the most earnest attention and study of all thinking men. He has at least enormously cleared the issue, and is the real protagonist in that attack upon Absolute Monism in which W. James and James Ward are but half-hearted, irresolute and undecided partisans. Between him and Gentile it is that the lists are set, and it is from the shock of such mighty opposites that now most light and help is to be looked for on the world-old problem of the One and the Many which still perplexes, tantalizes and baffles, our weaker powers.

*Meeting of the Aristotelean Society at 21, Gower Street, London,
W.C.1, on November 16th, 1925, at 8 P.M.*

II.—THE NATURE OF BEAUTY.

By LOUIS ARNAUD REID.

THE object of this paper is to form, without attempting detailed justification, a general theory of beauty and æsthetic experience. Detailed justification would be impossible in small space, but, apart from this, there seems to be a distinct place for a general philosophical review of a most complicated and elusive subject. Personal æsthetic experience, the testimony of artists, the results of psychology, general and experimental, are all sources of knowledge, yet each by itself tends to be very one-sided and incomplete. On the other hand, a philosophy which is not based upon these and upon every variety of knowledge, must perforce be barren. It is my very difficult task here to make the best use I can of the little I know, from different sources, of beauty and its experience, in order to try to achieve a perspective view of it as a whole. In the process of establishing a perspective much detail must be lost ; but this is as it must be, and should be. Philosophy itself is a work of art, and art, we know, is not photography.

The problem divides itself naturally into two main parts. The first part, which is the larger, is the problem of æsthetic experience. The second is the problem of the nature and status of beauty and its relation to the subject and to the objective world. Before beginning the discussion of the first part I may simply point out that I shall not be concerned with the problem of art as such. Almost all the examples will be chosen from works of art, and reference to art will be unavoidable. But the chief aspect of art

which will interest us here will be its beauty-aspect. The distinction between the problem of beauty and the problem of art is made possible by a belief*—which is contrary to the opinion of Croce and some others—that the process of æsthetic apprehension (e.g., the apprehension of the beauty of art) is clearly distinct from the process of artistic expression. To experience a poem, however perfectly and completely, is, I believe, a different sort of process from creating it.

Some (though by no means all) contemporary realists would have us suppose that beauty is as objective and independent of mind as the primary qualities. This, I believe, is too simple a view, and in the latter part of the paper I shall try, whilst disclaiming subjectivism, to show why. But in any case it is easier, more fruitful, and less question-begging to begin by considering æsthetic experience. It is easier, because if we were to start by trying to analyze in detail the various objects of beauty with a view to discovering some common character in them all, we should probably be baffled entirely by their amazing complexity. If not, we should be led into re-discovering some such abstract formula as “variety in unity,” and might be misled into supposing that this can adequately express the full, rich nature of beauty; and we should beg the question by assuming, quite unwarrantably, that beauty does reside in the objects themselves. It is true that the ancient formula does apply to æsthetic objects, and we shall find reason for employing it. But to approach the subject from this side is apt to be barren and question-begging. just *because* the formula is in itself and for its own purposes so comprehensive. It prejudices us to the view that the sole and exclusive character of beauty is its physical form. Let us begin, therefore, with æsthetic experience.

* Which I shall not try to substantiate here.

I.

ÆSTHETIC EXPERIENCE.

The most general characteristics of the experience of beauty are that it comes through the senses,* that it arises through perception of a more or less complex physical object, and that it has at the same time a significance and a value for the subject which wholly differentiates it from ordinary experiences of sense-perception. The fugue and the symphony and the patch of colours are sense-objects of greater or lesser complexity, and the extraordinary delight we realise in them is a delight in physical sound and colour vibrating through the senses. In the visual sphere the experience is rather less "resonant" than in the auditory one, but it is a sensuous experience. The Turner thrills us with its sheer vividness of colour, the Whistler at once sharpens and soothes the senses to the point of deliciousness, whilst the coloured masses of the purple or the snow-clad hills are a physical tonic to the senses. So in poetry, although an ideal element is prominent, there is the delight in sound, cadence, rhythm. To hear the music, to stare into the colourful picture or at the cathedral, to read and listen to the sounding poetry, is to induce a frame of mind rightly unsympathetic to any view of beauty other than one which gives to sensuous stimulation and enjoyment a place of real importance. Apparent exceptions there are, but they are, I believe, only apparent, and I shall not discuss them. When we speak, *e.g.*, of the "beauty" of characters or the "beauty" of ideas, we are either misapplying the term "beauty" or we are thinking of some expression or image or embodiment of character or ideas, some manifestation of physical grace, of balance, symmetry, coherence, unity.

On the other hand, if experience of beauty were merely sense pleasure, the pursuit of beauty in nature and all forms of art

* Though it may be remembered and imaged.

would not possess the dignity that it does, but would be mere self-indulgence, innocent, perhaps, but still self-indulgence. The whole trend of true humanistic education contradicts this. It is one of its chiefest aims to train æsthetic taste, and it sets artists and poets and musicians on high pedestals, not as pleasant ticklers of the senses, but as the spiritual benefactors of mankind. I do not suggest that beauty is all that enters into their arts: I only repeat—and it needs no argument at all—that experience of beauty is regarded by educated minds as possessing spiritual dignity of the highest order.

The problem of the kind of apprehension which is involved in æsthetic experience is a highly complex one, about which little is known, and the experimental work which has been performed upon it since the beginning of the present century has only served to show the need for greater detailed knowledge. I shall, of course, not attempt to discuss the question except in a word or two.

Various classifications of "types" of apprehension have been made,* and of these Bullough's own classification of four types† seems to be most satisfactory and compatible with other knowledge. The types are (1) the "objective" type; (2) the "physiological" or, better, the "intra-subjective" type; (3) the "associative" type; and (4) the "character" type. These were discovered by Bullough through experiments on the appreciation of simple colours and colour combinations, but were also confirmed by two sets of experiments, one by C. S. Myers and C. W. Valentine on individual attitudes towards tones,‡ the other, by Myers, on individual differences in listening to music.§ The

* For a useful summary of these see Bullough's "Recent Work in Experiment *Æsthetics*" (*British Journal of Psychology*, Vol. 12, pp. 81-7).

† *British Journal of Psychology*, II, 406 ff., and *British Journal of Psychology*, III, 406 ff.

‡ *British Journal of Psychology*, VII, 68 ff.

§ *British Journal of Psychology*, XIII, 52 ff.

classification, of its kind,* seems to be fairly fundamental. The objective type (1) involves an impersonal, intellectual, critical attitude towards the object, and bases appreciation upon, *e.g.*, the purity, saturation, luminosity, etc., of colours, the roundness or the blending properties of tones, or the technical devices and qualities of music. The physiological or intra-subjective type (2) bases appreciation upon the personal mood and the organic modifications involved; the associative type (3) upon the power of the object to call up associations or memory-images of past experiences. The character type (4) predicates moods or characters, *e.g.*, cheerfulness or sadness, of the object, as opposed to the physiological type, which thinks of colours and tones as cheering or saddening.

Obviously all types are not equally "æsthetic." The objective type is too "cold" and far away from the object to feel it sufficiently for æsthetic experience, whereas the intra-subjective type is too concerned with self-analysis, and is not objective enough. The associative type is more or less æsthetic according as the associations are or are not fused with the æsthetic object. Bullough ranges them according to their æsthetic value as follows: (1) character type, (2) fused-association type, (3) objective type, (4) non-fused-association type, and (5) the physiological or intra-subjective type.

It seems to me, on the other hand, that if we accept "types" at all, the only type which we can say is definitely non-æsthetic is the non-fused-association type. To praise or condemn an æsthetic object simply because it recalls a totally different experience is obviously non-æsthetic and irrelevant. - In general, however, it seems a mistake to regard these types as representing different "types" of *person*. The "types" are rather *aspects* of æsthetic experience or different *stages* of it, and although one or other of the characters tends to be predominant, there may

* And subject to the reservations below.

very well take place in a single person an alternation or a progress from one stage to another. The fused associative "type" of person may be identical with the character type. (Bullough does not deny this.) The intra-subjective type may represent simply an earlier stage of the character type, *e.g.*, we feel cheerful or sad, but have not reached the stage of projecting it into the object, or our reason may step in and restrain us from the palpable absurdity of saying that inanimate things possess moods. It was found in experiment that the physiological type did, in fact, approach to the character type, and that the subject sometimes found it difficult to say *ex post facto* whether the colour was cheering or cheerful. The judgment would obviously depend upon whether the subject, who might be perfectly "æsthetic," was thinking truly "æsthetically" or was trying to justify his experience intellectually. In æsthetic experience, no doubt, the feeling is projected, but it is difficult to make this sound rational afterwards. Again, although the objective type of judgment may be non-æsthetic, it does not follow that the person is. Many of the most æsthetic persons, *e.g.*, artists, would hesitate from predicating non-æsthetic characters of an æsthetic object, partly because they rightly believe that the æsthetic is properly translatable into terms of nothing but itself, partly from the fear of appearing sentimental, and partly because as æsthetic experts they are also interested in technical questions, in the relative values of colour, in composition, execution, etc. Myers indeed found* that the most musical persons were also the most critical, making many technical observations. This is perfectly natural, and does not in the least imply that such persons are non-æsthetic.

Generally speaking, one may well urge that not only technical intellectual analysis, but much else, is involved in all mature æsthetic appreciation of complex æsthetic objects. To appreciate æsthetically involves little less than the whole mind-and-body,

* *British Journal of Psychology*, XIII, 58.

so far as it is directed towards the interpretation of the object itself, and not merely to knowledge or associations which it may suggest. The experience of beauty may be a simple fused intuition, but that is not to say that it is not built up in the most complicated way. Indeed, the complications involved in learning to appreciate simply a picture or poem or symphony are amazing. There is the general apprehension by the mind-and-body of the whole. There is description of it, implicit or otherwise, as well as intelligent general observation of qualities and relations. There is further analysis and intellectual judgment followed by synthesis into a richer whole. There is feeling and emotion aroused by this "new" whole, and the "projection" of the mood into the object. There is a whole world of associations which must become fused and integrated. This is a slap-dash and inadequate enough sort of description. I have bundled together some of the facts simply to illustrate that simple psychological experiments, though valuable and quite indispensable, may tend to over-simplify, may tend to take the process that is uppermost and predominant, as representative of a whole person, whereas it is only a single aspect.

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Our task now is to consider a little more carefully the nature of this æsthetic experience which involves such complications. How is it that the perception of certain sense objects can give rise to some of the most remarkable experiences within human ken—experiences rapturous beyond all words to describe? By what process is it that the curves of a beautiful vase, the massed shadows of a D. Y. Cameron, the delicate traceries of a Morris tapestry, the size and colours of a mountain, the sheer bulk of an ancient Egyptian temple, the rising note of a melody, the fluttering of the strings, the crash and flash of the trumpet and drums—may come to mean things which are ineffable?

The answers are not, cannot be, ineffable. They must be put in plain, and perhaps very unbeautiful, prose. But analysis

is fortunately ideal and does not shred the real into little pieces. The symphony is no less divine because, before it can be played, sheep must be disembowelled and dead calves skinned.

In the first place, the experience, as we said, arises always through a sense object, and the apprehension of it is sensuous. This is so important and fundamental that it has often led thinkers to suppose that almost the whole of æsthetic experience is sensuous, and that to cite the muscular and nervous processes involved in perception is sufficient to account for the total richness of the felt experience. And certainly we have to admit that all æsthetic experience does involve these organic happenings. We have to admit that perception is motor, and that æsthetic consciousness is primarily conditioned and always qualified by motor processes and the feeling of them. Criticisms of physiological theories go much too far when they deny this. When Bosanquet, quoting

"How sharp the silver spearheads charge
Where Alp meets heaven in snow,"

adds, "one cannot believe that these lines appeal to us through bodily movements,"* he is surely pressing a true idea to an absurd extreme. What he meant was, of course, that bodily movements alone do not account for the richness of the experience. But suppress all bodily movements and you cannot possibly experience the lines at all.

Theories which lay stress on organic modifications enlarge upon the perceptual processes involved in apprehending lines. It is thought that, in the first place, æsthetic experience is chiefly grounded on the supposed fact that when we perceive lines our body tends to try to move along with the lines, and that this movement is pleasant, satisfying, harmonious with our natural functions. In perceiving the long pointed arches of the Gothic cathedral we strain the neck and head upwards, we move the

* Three Lectures on *Æsthetic*, p. 24.

eyes, there is incipient imitation of the object : so it is alleged that, in following curves, we follow the lines with our eyes and, to some extent, with our bodies, and that this is satisfying. In the second place, we read our experience into the object and say the lines themselves move, and move pleasantly. The theory is familiar enough and needs no elaboration.

One familiar refutation of this view takes the form of an attack upon the eye-movement theory. It is pointed out that the eye, in following a curve, does not move in curves, but in jerks. This is incontrovertible, but it does not render the whole theory invalid. The eye may not follow the curved line, but it does not follow that the jerky movement is disharmonious with its function. On the contrary, because pleasure is a sign of successful functioning, and we take pleasure in looking at curves, the functioning may well be self-harmonious and successful, though we cannot say this with certainty because it is impossible to isolate experience of eye-movements from all sorts of other factors.

Whatever be the truth about the pleasure of eye-movements, the fact remains, as has been said, that eye-movements are only a small part of the total movements of the body. Nervous and muscular processes take place throughout the organism. On hearing a high note we incipiently stretch up ; on apprehending the mountain we may stand on tiptoe and expand and spread out, and there may be drawing movements of the hand. The feeling of these and many more physical processes must certainly in some measure contribute to our feelings of the whole. Nevertheless, the actual effect of this is probably achieved much more indirectly than directly, more through ideal and mental than through physical sources. We know that the sides of the mountain "rise" and "fall" because we have climbed a mountain, because in the past we may have drawn it with upward and downward strokes. In actually contemplating the Gothic

cathedral there may be comparatively little actual movement, but the curves suggest motions which we have found in the past to be easy and graceful. We have found in the past, through bodily movements, that symmetry and balance is pleasant, and through these associations we come to take pleasure in the balanced symmetrical form and to impute characters to it. The enjoyment of the comparatively slight actual movements of perception must always be reinforced from ideal sources, from memory and association. This conclusion is reinforced by the fact that it has been found that very rapid exposure of a picture is insufficient to cut out "einfühlung" or empathy.

But even if we supplement in this way the organic theory of æsthetic experience it is still wholly inadequate. In the first place it is applied to forms, lines, rhythms, to the exclusion of colours and sounds. In the second place it cuts out a great deal of the spiritual significance which undoubtedly belongs to beauty, and which makes it more than a matter of mere pleasurable feeling. A true theory must account for the significance of tones and colours as well as of rhythms, lines, forms, and it must account for the highly spiritual significance which in concrete æsthetic experience beautiful things may come to possess.

This brings us to consider the whole question of the association and the symbolism of æsthetic forms and contents. The term "symbolism," on the whole, seems to me preferable as a general description to the term "association" because it suggests the continual presence before consciousness of the physical object itself, whereas "association" is very apt to mean unfused association. If the term "association" is to be admitted at all into æsthetic theory it must be stressed as the alpha and the omega of the theory that the term must refer only to what the physical form in its appearance intrinsically suggests, not to an independent

and psychologically unrelated subject-matter or to any train of ideas which may lead us away from the physical form. "Association" in æsthetics must (once more) mean *fused* association. With this precaution we may go ahead to speak of "association" as accounting for much of the "symbolic" character of the æsthetic object.

Before we come to associations proper, however, a factor must be mentioned which has some influence on æsthetic experience, and which is scarcely included under what has been said. I mean the degree of stimulation of mood directly aroused by some aspects of the physical objects. Quite apart from their associations, colours and tones have a direct effect upon our mood by means of their physical stimulus. Red in itself is an exciting colour, blue is much less so. A loud tone is more stimulating than a soft one, and, of tones of the same loudness, tones of one pitch are more stimulating than tones of another, so that the predominance of one particular intensity of colour or tone may affect the general mood. The picture or the tune is vivid or restful, gay or sad. The rate of rhythm is another factor which affects the mood. Think of the difference between *presto agitato*, *andante*, and *largo*.

Associations proper in æsthetic experience are very complex and varied, and in what follows I shall simply allude to one or two general tendencies which are certainly neither mutually exclusive nor together exhaustive. In the first place, there are the definitely spiritual experiences with which are directly associated the organic (plus ideal) changes to which we have referred. I mean the moral and spiritual experiences with which are associated certain physical motions. Yearning means (perhaps) stretching out, aspiring, stretching up, in depression or contentment we sink down, in the spiritual sense of unity and togetherness we may make encompassing movements. And these various movements, when suggested by the perceived

object under suitable conditions, may* in turn awaken the associated spiritual experiences. This is roughly true, and does not take sufficient account of the fact that no æsthetic mood is ever an exact translation of a former one, but is concrete, particular and special. Still, it is good enough for present purposes.

In the second place, the same generally speaking is true of the spiritual experiences with which are associated the experience of certain vocal sounds, rhythms, cadences. Moods and feelings tend to express themselves in bodily sounds, and nothing can be more expressive of feeling than the gradations and rhythms of the human voice. When certain sounds, rhythms, etc., occur in art or nature, therefore, we take them to be "expressive," associating them immediately with the appropriate moods and feelings. This takes place partly through incipient imitation with its directly accompanying feelings, and partly through fused associations with past experiences. And again, as before, this is sufficiently, but only roughly, true.

In the third place, there are the spiritual qualities directly symbolized by physical shapes and lines in themselves. We speak of a "square" action, meaning, perhaps, like Pythagoras, when he thought of justice as a square number, the returning of "equal for equal." In the same moral sense we speak of "straightness" and "directness" on the one hand and "crookedness" on the other hand. We speak of strong, weak, wavering, delicate, refined lines, and very often mean by the terms not simply

* I say "may," not "will," for the actual effect will entirely depend upon their prominence and relation to other factors in the whole. This applies right through to what I shall say of associations. It is not "one thing, one association," and the whole a mere summation. In the æsthetic unity nearly everything depends on its relation to everything else. We must not be misled by simple associative tests.

physical qualities but something more. In describing character or ideas we use the adjectives sharp, acute, broad, massive, high, lofty, rounded, perfect. These qualities (square, lofty, etc.) are associated with fixed characters or spiritual qualities statically regarded rather than to the dynamic and active processes of experience cited in the preceding paragraph. And once more the suggestion of the associations tends to modify the "mood" of the whole experience.

Fourthly may be cited the most obvious kinds of associations of colours and shapes and sounds. These are associations primarily with objects which possess these colours and shapes and give forth these sounds, and secondarily with the feelings or emotions which these objects call up. Red suggests a warning and the emotions of danger; black suggests mourning colour and the emotions of sorrow; blue and yellow suggest the sky and sunlight and the sense of happiness and well-being which these normally evoke. Of shapes, the tall, slender pyramid suggests the spire and associated "church" emotions; the broader pyramid suggests the heap or monument or mountain, and the feelings these call up; the pagoda has a Chinese flavour. And no doubt shapes may possess sexual significance, though this may easily—as regards normal persons—be exaggerated. Of sounds, trumpeting, bugling and beating of drums suggest martial activity and feeling, the flute may suggest bird song and spring time, the horn may suggest hunting emotions. And so on.

All these associations (to which might be added many others both natural and conventional) may be more or less conscious or they may be quite unconscious; but we may say with confidence that in the æsthetic experience proper they must not be more than sub-conscious. If they are realised *as* associations, fusion is imperfect. Again, some associations are common to all men, and some are individual only. There is no harm in admitting to the

realm of æsthetic experience purely personal and subjective associations, so long as they are properly fused. But the *artist* must beware of them, lest his work have meaning only for himself.

All such symbolism enriches the experience of the æsthetic object here and now, and is made effective by means of the æsthetic ability to feel many things fused together in a single unity. By means of this talent—for it is no less—whole worlds of experience become focused and concentrated into a very simple intuition. The artist in his skill makes use of his æsthetic intuitions to bring many universally significant things together, and it is this which makes art so very much more important than it would be if it were merely sensuous.

This “bringing together” is of the greatest importance in another way, and indeed it may be said to be the chief criterion of æsthetic, as opposed to other, experience. In speaking of colours, sounds, forms, and their associations, we have been considering what are merely the raw materials of æsthetic experience. But æsthetic experience is not, of course, a mere jumble of associations, however “fused,” suggested by an object. The object has “*form*” as a whole, the form of “variety-in-unity,” and it is the felt experience of this form which more than anything else constitutes the essence of the true æsthetic experience. The qualities are many, but they are in relation to each other and to the whole, and have no meaning apart from the whole. They are subordinate to the structure, and in apprehending their structural organisation we are aware of something perfect, which is perfect as nothing in ordinary experience ever is. Within the frame of the picture and the time-limit of the symphony is a complete self-sufficient universe. Æsthetically speaking, the picture or the symphony is not a finite object, revealing “torn edges” like other finite things. It implies nothing outside itself, and whilst we contemplate it we live the perfect

life. The claims to which this extraordinary experience leads we shall consider shortly. For the moment let us consider another criterion which has also been regarded as essential.

I refer to what Mr. Bullough has termed "psychical distance." By "psychical distance" Bullough means a certain "projection" of the subjective experience into the objective world, so that it is no longer felt as merely personal, subjective experience, but is contemplated impersonally as objective. We become detached from our experience, so to speak, and in this way are able to appreciate it æsthetically, although if the detachment is overdone and the "distance" be too great, the subject is not able to come in contact with its object and to experience it. For æsthetic experience there is one correct "distance," and no other, for each person and each thing. To quote Bullough: "Distance is produced in the first instance by putting the phenomenon, so to speak, out of gear with our practical, actual self; by allowing it to stand outside the context of our personal needs and ends—in short, by looking at it 'objectively,' as it has often been called; by permitting only such reactions on our part as emphasize the 'objective' features of the experience, and by interpreting even our 'subjective' affections not as modes of *our* being, but rather as characteristics of the phenomenon." "Distance," Mr. Bullough thinks, is both a factor in art and an æsthetic principle—indeed, he inclines to regard it as the most important and fundamental principle of æsthetics.

I agree that we must admit this as *one* of the fundamental principles of æsthetic experience, and we must, without doubt, admit that Mr. Bullough's researches on the subject are of first-rate importance and interest. But it seems to me that he claims too much for "distance." It is *an* essential æsthetic principle, but it is questionable if it is the most important of all, and certainly it is not, so far as I can see, *the* principle of æsthetics.

* *British Journal of Psychology*, V, 89.

We may readily admit that all æsthetic experience must be distanced in order to be æsthetic; but we may not admit identity, *i.e.*, that any distanced experience whatsoever is, as such, æsthetic. Bullough, of course, does not say that it is. It must be the *right* distance to be æsthetic. "Distance" in general is a condition of more kinds of experience than the æsthetic: the scientific outlook, for example, is distanced, though the distance is doubtless different from what it is in æsthetic experience. In other words, æsthetic distance is a member of a wider class, and its differentia is "right," which Bullough defines as "the utmost decrease of Distance without its disappearance."* And the whole question is, Is an experience "rightly" distanced necessarily an æsthetic one?

I do not think that we can say that it is. It seems to me that we must add to it another character, the character already mentioned of "æsthetic" *form*, *i.e.*, "variety in unity." It seems perfectly possible to have an experience which is, according to Bullough's definition, "rightly" distanced, without that experience being an æsthetic one. I do not see that it would be impossible to distance "rightly" an objectively incoherent and self-contradictory form which should reveal no "unity," and where variety would run amok into confusion. We could feel it intensely and yet contemplate it objectively. And it would be at the same time, according to general æsthetic opinion, definitely *ugly*. It is hard to see why the incoherent should not be "rightly" distanced, and it is equally hard to see how, without inner harmony and unity, anything could be beautiful. According to Bullough's formula, anything *can* become beautiful if properly regarded, and this, though held in respectable quarters, seems to me most unsatisfactory.

Form in general and distance in general are very closely bound up with one another. Distance is one of the conditions of form

* *Ibid.*, 94.

being known as such. We cannot contemplate a thing as form unless it is to some extent objective to us, impersonal, distanced. Distance is certainly, therefore, the condition of the apprehension of æsthetic form in particular, with the special qualification of "right."

On the other hand, the form of variety in unity is a condition of "right" distance, though it is not its only condition.* The æsthetic object compels attention for its own sake. Being an internal unity and having no external relations, it suggests no relation to the rest of life, or to the practical needs of the spectator. This impersonality and objectivity is one of the characters of distance. It seems to me that the formal factor is an essential condition even in the striking example which Mr. Bullough takes of a fog at sea, where it is intended to show that it is a degree of "objectivity" and "remoteness" which constitutes the æsthetic character. It is the curious nature of fog that it does unite and unify things in a strange way, that it shuts off the rest of reality and frames us in a magical world where shapes and sounds and movement are weirdly seen and felt together within a whole. Certainly there is "distance," and the distance is no doubt exactly the right condition for æsthetic experience. But there is also unified form, and the form in this case seems a condition for the distance. Whether it is so or not, the experience without the unified form would not, once more, be truly æsthetic.

Generally and in a word, then, it would seem that the right distance is an essential condition of æsthetic experience, that unified form may be one of the conditions of right distance, but that the rightly distanced object must possess the character of unity in variety. Distance and unified form are both essential,

* Bullough shows in a most interesting way (*op. cit.*) how other factors affect and are affected by distance, *e.g.*, how the lack of ability to "distance" adequately makes censorship necessary, and how we can often only appreciate art adequately when separated from it by a considerable space of time.

but unified form is of prior importance. It is an objective character for the subjective apprehension of which distance is necessary.

Let us now turn to consider a claim to which the æsthetic experience of perfection gives rise. I mean the familiar claim, born of the ineffable transport of æsthetic delight, and made in common with the mystics, that the riddle of existence is somehow solved. It is epitomised in the hackneyed but telling phrase. "The rest may reason and welcome, 'tis we musicians know."

The belief that æsthetic experience gives a knowledge of reality which is beyond reason is no doubt due to many things, I simply jot down one or two which occur to me as important. In the first place, the claim is a valid one so far as æsthetic experience is an intuition for which no reasoning processes can be a substitute. In experiencing beauty we realise within ourselves* the glory and worth of an inner harmony and unity of perfection, and it is the feeling of this unity which, among other things, leads us to suppose that the riddle of existence is solved in this single moment of experience. In a sense the riddle of existence is solved. That is, it is solved so far as we at the moment are concerned. It is solved in the sense that we are living perfectly, if only for a short time, and in that through a direct intuition of the inner harmony of our own life we are intuitively aware of the nature of life and its meaning. Living life perfectly at a high pitch of intensity is a qualification for knowing it and understanding life's meaning. Feeling so intensely real, what wonder is it that we come to believe that we know the real, and in a way for which no process of reasoning can ever be a substitute?

Again, so *much* experience is fused into the æsthetic moment by means of symbolism. Theoretically, there are no bounds to the richness which, through artistic and æsthetic skill, may be associatively embodied. Though framed and limited by space

* However true it may be that we project.

and time we are in the same instant touching the infinite and the endless. Hear Pater, of *La Gioconda*: "The presence that rose thus so strangely beside the waters is expressive of what in the ways of a thousand years men have come to desire . . . It is a beauty wrought out from within the flesh, the deposit, little cell by cell, of strange thoughts and fantastic reveries and exquisite passions. . . . All the thoughts and experience of the world have etched and moulded there, in that which they have of power to refine and make expressive the outward form, the animalism of Greece, the lust of Rome, the mysticism of the middle age with its spiritual ambition and imaginative loves, the return of the pagan world, the sins of the Borgias."

But it is not only feeling which is satisfied and enriched through the magic of symbolism. Intellect is satisfied, too, and the claim to universal experience and limitless knowledge may well be rooted in the satisfaction of intellect as elsewhere.

Intellect in a manner finds satisfaction in beauty for its profoundest desire. In apprehending the structure of the fugue, picture, or temple, we are performing within a limited sphere but in a peculiarly satisfying way, one of the most fundamental functions of our existence. We are using our powers of intellectual analysis and synthesis, and that not upon an object too baffling for success but upon one which provides sufficient difficulty for stimulus, but which in the end always leads us home to success and completion.

There are various kinds of beauty, and intellect exercises itself accordingly. There is what Bosanquet called "easy" beauty and "difficult" beauty, and there are all grades in between. In the very simplest æsthetic objects, such as the circle or the major third or the ticks of a metronome, there is the minimum of difficulty and (in normal persons) a certainty of success in comprehending. In the case of the circle there is so little difficulty that the stimulus required is almost absent, and

to-day we should scarcely think of saying that the perception of a circle yields æsthetic experience. Again, the mechanical clattering rhythm of the jazz band is wearisome, if long continued, to anyone who has used his mind upon worthier objects. Still even in these cases, there is a unity of difference which requires a minimum of intellectual activity and satisfaction. We are "brought home." More complex arts, on the other hand, require more complex activity to apprehend them. They set the intellect really working, and reward it by giving it success after some effort. The poetic rhythm is not merely mathematical, but varies within a set pattern, the melody wanders out, seems as though it were about to lose itself, but brings us back by a devious route. The intricacy of a Bach fugue compels our labour, but gives us more than a labourer's reward. The masterpieces of a Rodin or an Epstein may baffle and weary us for a time, but if we have the courage, the wits, and the artistic bent, our reward is very great. If the beautiful thing is too difficult for us, if it finally defeats us, we curse it and its artist, or say "It is too high for us," according to our temperament and mood. If it finally beats and baffles everyone, if, objectively, it is in itself of such a nature that it must leave us distraught, if it is incapable of bringing us home to a self-contained perfection, then objectively it is not beautiful, but ugly.

The point is that perception of most kinds of beauty involves a stimulating intellectual exercise which is peculiarly satisfying just because it is brought to rest in the way described. Here, possibly, is one cause of the "Idea to sense" conviction.* Our intellect, we may suppose, has as its ultimate function the ideal analysis and synthesis of a reality that presents endless problems which for us are never completely solved. In æsthetic perception

* I mean the æsthetic conviction, not, of course, the philosophy rooted in Hegelian presuppositions.

the same intellect is exercised (giving the satisfaction of all healthy exercise), and upon a more or less intricate problem. But in this case, because of the unity and inner harmony of the isolated æsthetic object, it is satisfied as it never is in ordinary experience with its "torn edges." This attainment in æsthetic experience of the satisfaction for which intellect longs, but in ordinary experience never reaches, is probably one of the factors which leads to a felt (if not an explicit) conviction that in æsthetic experience we "know all." The complete fulfilment of the function of intellect would be *complete* knowledge of the world. This is impossible, but in æsthetic apprehension there is *completed* knowledge, and the satisfaction (there and then) of a fulfilled function. The feeling of fulfilment of a universal faculty may and does sometimes seem to lead to the supposition that it was, somehow and in some unexplainable way, its proper object which satisfied it (*i.e.*, full knowledge of the meaning of the Universe). Intellect gets, through æsthetic experience, the order for which it craves, and it is not hard to see how theory based directly upon the experience may confusedly suppose the felt æsthetic order to *be* the order of the cosmos.

These subjective processes, then—(1) the feeling of inner unity and vitality, (2) the feeling of fusion of a wide range of experience, and (3) the almost "cosmic" satisfaction of intellect in the apprehension of the æsthetic object—give rise to claims of unique knowledge. On the objective side this is reinforced by the absoluteness, perfection and self-sufficiency of the æsthetic object. To know parts in relation to an æsthetic whole is, indeed, to know something which though finite has real quality of infinity.

But all this is true and justifiable only if the æsthetic object is looked at æsthetically. Regarded otherwise, the picture is nailed to a frame on the wall of a house where human beings eat and smoke and sleep and carry on their business. Or the picture

is canvas good for burning. After the symphony we yawn and creep home to bed. *Æsthetic* experience in itself is a valuable knowledge of wholeness and reality, but it is not knowledge of the whole of Reality. Let the musician "know," and let the others "reason," but let not even the musician (and certainly not any musically-minded philosopher) suppose that his "knowing" is a good substitute for wearisome reasoning. Intuition and feeling are most valuable and indispensable. They may suggest, they may lead us to make propositions which may turn out to be profoundly true, and which, without intuition and feeling, might never have been discovered. But at the best they are limited to a single point of view : they are single experiences, and the propositions to which they give rise require to be set side by side with other propositions and correlated in the usual laborious way. The whole of practical moral life, to say nothing of the whole of reality, is not compassed in a single moment nor realized at a single point of space, however deep and rich and amazing the experience at a point may be. Let the musician be the musician, and let the philosopher listen to him even when he speaks ; but let each realize that art is no substitute for philosophy and practice, any more than philosophy and practice are substitutes for art.

II.

THE NATURE AND STATUS OF BEAUTY.

It now remains for us to discuss the second main part of our problem, and to try to discover the nature and status of beauty in relation to knowledge and reality.

In order to avoid periphrastic circumlocution, I have frequently spoken in this paper as if beauty were a quality of the physical object-in-itself. This strictly is not true. The unified physical form of the object, which we perceive and which may evoke in us the *æsthetic* experience, belongs to it, and is wholly independent

of our perception. Not so beauty. The object may be said to possess the power of calling up, under certain conditions, an experience of beauty, but beauty is never realised, is never actually real or existent at all, without the presence of appreciative mind. The physical object has causal efficacy, and can (I presume) be shown to persist apart from our minds. But the thing we call beauty has no causal efficacy apart from minds, and I cannot think of any valid argument to show that it can exist when it is not apprehended.

It may be objected that I am contradicting myself in speaking on the one hand of an "it" which is apprehended, and saying in the same breath that "it" is not apart from apprehension. Apprehension, it may be urged, does not create; it simply apprehends. I agree. But my argument is not that *apprehension* (or cognition) *creates*, but that *mind* (-and-body) *conditions* beauty.

In the first place there is a distinction between creating and conditioning. To say that mind conditions beauty is not to say that it creates it. It is only to argue that it is one among a number of conditions. To say that certain chemical qualities in the environment are necessary that the seedling may sprout is not to say that the aforesaid chemical qualities *create* the sprouting life. So to say that mind is necessary in order that beauty may actually exist is not to say that mind creates it. There are many other conditions as well, one of the most important of which is the existence of the physical forms of the object.

In the second place, to say that mind conditions is not to say that apprehension conditions, though it may be true that without apprehension beauty never, in fact, does exist. That which (among other things) actively conditions beauty is not apprehension, the business of which is simply to apprehend, but the whole complex activity of mind-and-body of which we have spoken so much. And that of which we are conscious in being conscious of beauty is just this complex activity of body and mind

in relation (always) to the form of a presented object. Further, if it is true that beauty never in fact exists apart from apprehension, this is (not because apprehension as such actively conditions, but) because conscious apprehension always accompanies the complex activity of mind-and-body, which is an essential condition of beauty. At least I know of no evidence that the complex activity ever occurs without our being conscious of it.

This view of beauty is not open to the criticism of "pure subjectivism." I believe that the common supposition that the only alternative to pure objectivism is pure subjectivism is quite erroneous and must be boldly challenged. The case is not nearly so simple. The mind as knowing does not make beauty, and even the mind as active does not make it; it is only one of the essential conditions that it should actually exist. Nor is the view "pure objectivism," if by that is meant the doctrine that beauty resides in the physical object-in-itself. The physical object with its forms is again but an essential condition that beauty may exist.

Nevertheless, in our unanalytic æsthetic consciousness we do, of course, impute and project the beauty on to the physical object. It is through the apprehension of the physical object that the æsthetic experience arises. The physical thing breaks in upon our consciousness. We are so absorbed by the sunset itself, we are so intent in focusing the thrilling physical object, that we are not aware of our own bodily and mental activity as conditioning its value for us. Our own processes are, so to speak, transparent: we look through them. A little subsequent reflection, however, may convince us that our mental states, with all that they involve, are quite as important as the sunset.

But whilst the beauty does not reside in the physical thing, it does not follow that it is not "objective" in an important sense. We have already seen that it is objective in the sense that it is an object for apprehending mind, and is discovered by it.

Beauty may never exist without mind, and yet be truly discovered, and not created, by it, as we said. Let us consider this a little more carefully.

The apparently paradoxical nature of the statement disappears if we remember that it is mind in one character which conditions beauty, and mind in another character which discovers it "ready-made." The two characters may be as closely interwoven as it is possible to be, but they are clearly distinguishable. Put briefly, the state of affairs is something like this. There is, on the one hand, a physical object possessing physical form of a kind which is capable of stimulating æsthetic experience. There is, on the other hand, a mind-and-body bent upon apprehending as clearly and vividly as possible the physical forms. This apprehending process is a very complex one, involving, no doubt, conation and feeling as well as cognition, but its sole aim is, as I have just said, to apprehend, to experience vividly the physical object. (Let us call this whole process A.) But at this point a new factor arises. It is that the process A possesses, as a whole, a character which resides nowhere but in the whole. That character is value, æsthetic value, the value of beauty. This value (let us call it V) belongs to the whole process A—that is, it arises out of the complex relationship of subject to physical object. It is this V, ready-made, or produced, or involved (or whatever term is most suitable) by A, of which mind is aware in a second distinct process of apprehension (which we may call B), a process which, like A, without any doubt involves conation and feeling as well as cognition. I have in previous pages spoken of A as "activity" and B as "apprehension" (or cognition) only because beauty was my subject. Whilst, on the one hand, A is not as such concerned with apprehending beauty (though it *actively conditions* it), but a physical object, on the other hand B cannot be said to condition beauty by its activities as A conditions it by its

activities. B's business is to *apprehend* beauty and not to condition anything except its apprehension. A simply apprehends (though it does not in any way condition) the form of the physical object, but it does actively *condition* beauty. B simply *apprehends* beauty and does not in any way condition it.

I must repeat, what is obvious, that the two processes, A and B, are not to the aesthetic consciousness distinct. Neither are they, in reality, side by side, in the way in which it is necessary to represent them in analysis. A and B form a complex whole. B does not attend only to the value, and A only to the physical object. In reality there is no A and B, but only A B. The value is experienced in and through and roundabout the absorbed attention to the object.

Beauty then is objective in the sense that, though conditioned by mind in one aspect, it is discovered by mind in another, and is mind's object. Nevertheless, to say this is not to say more than it is possible to say of the veriest illusion, which, in one sense, is always objective, is always "discovered" by mind and not made by it. Can we say that beauty is "objective" and "real" in any more profound and more satisfactory sense?

If "objective" and "real" is to mean, on the one hand, more than "mind-independent" (and we have seen that in one sense beauty is not mind-independent), and if, on the other hand, it is to mean more than simple "fact" (and illusion is fact), then it must mean "significant for human life." I say "for human life" and not "significant," simply, because as it is only through conscious life that beauty comes to have existence, so it is only in conscious human life that it has significance. And that it has a profound significance for human life, a significance for mankind, which no mere illusion ever had, seems certainly true.

It seems to me that beauty is significant and (with careful reservations) has an objective character which belongs to no

mere illusion, because of its *symbolism*. Take the simple beauty of a cube. That the beauty does not actually reside in or on the cube I hope by now is clear. Yet the spiritual significance of unity, solidity, equality, etc., is something which is not subjective but objective, and has value which far transcends the range of any individual mind. The spiritual significance which is symbolised through fused association derives its quality and value from the nature of ultimate Reality itself. The original experiences (*e.g.*, of the moral worth of "solidity," "unity," "justice," "uprightness" of character) were experiences of *objective* Reality as much as anything can ever be. And in perceiving the cube we are experiencing again to some extent, though with very great modifications, those truly objective characters. It is true that the beauty of which we are in search cannot be attached to these previously experienced real objects. The beauty rather belongs to the present synthesis (as a whole) of our modified experiences of them. But through perception of the present symbolic object we are experiencing in a fashion the wider reality.

What seems to happen is something like this. Consciously, when we apprehend the physical object, we look at it. Sub-consciously, and by means of the fused associations which it suggests, we look through it into a wider realm of objective things. Through its unity our recalled experiences of these realities are integrated (no doubt with most drastic selection, modification and elimination) into a harmonious whole. The actual quality of the beauty of which we are in search does not belong to the physical object, nor to the objects of previous experience (nor to the mind). It belongs to the synthesis of present sensuous mental experiences enriched by fused associations with the past. And the synthesis is made possible by the physical unity of the object, and the synthetic activity of mind in relation to it. It is like looking through a many-coloured

lens through which we are able to focus a wide area of reality, coloured, transformed, made magical.

Beauty, then, is not in things, but arises only out of mind's relation to things. Yet the concrete æsthetic experience is objective knowledge of reality, first by being knowledge of the physical object, and, more important, by being, through the symbolism of the physical object, a peculiarly concentrated conspectus of human experience with all its wealth and value.

In a single word, beauty is the quality of the synthesis of experiences of objective reality with all its value and meaning, which is made possible through apprehension of a symbolic physical object having variety in unity.



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W.C. 1, on December 7th, 1925, at 8 p.m.*

III.—JUDGMENT AS THE FUNDAMENTAL ACT IN KNOWLEDGE.

By C. R. MORRIS.

THE object of this paper is to examine the implications for logic of a well-known theory of knowledge. First, it will be necessary to give an outline of the theory of knowledge, which will readily be recognized to be, in essentials, Kant's theory; it will then be urged that the only kinds of judgment which logic may properly study are judgments asserting necessary connection.

It is recognized that in the end all knowledge must depend upon perception. It is clear, however, that the use made of perception by the ordinary man is from the point of view of knowledge hopeless; it is to the use of perception in the sciences that we must look if we wish to understand our progress on the road to knowledge. For a long time the practical sciences argued in the same way as the plain man argued: whenever one thing appeared constantly to follow a certain other, men jumped to the conclusion that this order must always be maintained, and the first event must cause the second. Scorn was rightly poured on this "jumping to conclusions" by Hume as being a mere arbitrary habit of the mind, and it was thought for some time that this sceptical attack had irrevocably thrown all scientific knowledge on to the scrap-heap.

According to Kant this was not so: for in the rebirth which came to physics at the Renaissance "a fresh light flashed upon the student of nature." It is implied that Hume had not noticed the appearance of this fresh light, and therefore had missed its

importance. The analysis of the new science involved a fresh theory of perception and judgment. On the old theory of perception it was assumed that all the observer had to do was to open his eyes and look, and the truth would be revealed to him : that nature would in the end yield her innermost secrets to any country yokel who sat with his eyes open and gaped, if only he gaped long enough. Every inquirer after truth knows that this is not so ; sense-perception is only of value to him who controls and uses it. The searcher after knowledge must approach nature "as an appointed judge who compels the witnesses to answer the questions which he himself proposes." This is our ordinary view in common life. We take credit to ourselves for discovering some fresh fact about the world ; we do not say : "Nature in the end gets herself understood by the merest babe or the simplest fool, be they ne'er so foolish" ; we claim honour in that we have by our own hard toil forced nature to divulge her secrets.

If we are to expect perception to lead to knowledge we must approach nature with a definite question in our minds. But what kind of question ? We must examine the questions which science expects to answer by experiment and observation, to find out of what kind they are. For it is obvious that it is easy for the human mind to ask questions which it cannot answer ; indeed, most of its questions will be found to be of this kind. Before approaching complicated instances in scientific method it will be well to point to simple experiments of the kind which is used in instructing beginners in the elements of geometry or mechanics.

Suppose I put out my finger and push a matchbox along the surface of the table. The ordinary man will just notice that my finger is moving a matchbox, or, if the conditions of perception are bad, will puzzle himself, for instance, as to whether it is a matchbox and whether it is a finger. My perception is, however,

different, for in pushing the box with my finger I am performing an experiment. I forget that my finger is a finger and that the matchbox is a matchbox, and treat them both as simply "bodies"; I can then see by this simple perception that two bodies cannot occupy the same point in space at the same time. As far as this piece of knowledge is concerned, that one simple perception has convinced me, and if ever I doubt the truth of the statement the performance and examination of the same experiment will convince me again. I do not go round the room and try it on all the other bodies in the room, nor do I say that I cannot answer the question because I cannot move the mantelpiece. Nor do I say that it may be that "my eyes have deceived me." My perception has yielded me a judgment which is true.

The conclusions from these considerations would seem to be that if we approach perception determined to look for relations between things of a certain specified kind, we shall acquire knowledge, and if not, not. The empiricist sceptic assumed that knowledge must be acquired by the piling up of innumerable simple attributive judgments through perception, and when he discovered that knowledge could not be acquired in this way, he drew the conclusion that knowledge was impossible. This was to say that if knowledge could not be acquired in the way he wished, he would have nothing to do with knowledge at all. If, on the other hand, our examination has been sound, such knowledge as we have—and we have yet to examine its limits and its nature—is acquired in a quite other way, and therefore the sceptic missed in this analysis of perception the very elements which matters for knowledge. We have discovered that perception yields fresh knowledge only when it is used to examine the crucial experiment—when we know what we expect to find, and can determine with a considerable degree of accuracy whether it is there to be found or not; here the conditions of perception can deceive us less and less, for as science advance,

we can more and more accurately determine them, and thus know what they are: in proportion as we feel more confident of our preparations for the experiment, in that proportion do we feel less and less that our senses may deceive us.

It may be a matter of doubt how far this method of advance can take us, but surely there can be no doubt that this method is the most hopeful method—is indeed the only method by which we can claim through sense-perception to gain new knowledge. If the arguments we have urged have been sound, the importance of perception in the process of acquiring knowledge would be something like this. It would seem that perception can only contribute to knowledge through judgment. Now the value of judgment depends on the accuracy with which we use our (grammatical) predicates: the judgment can only be of value in so far as we know exactly what we mean by the predicate, so that we really know what we are doing and what ground we are gaining by asserting that predicate of that subject. It is generally assumed that we come to develop our predicates—to determine more accurately what we mean by those predicates—by examining and comparing the subjects of which we affirm them. But if what we have been urging is sound, the way in which we do this, when we do it most successfully and valuably, is rather by the discovery through the sciences of necessary relations between these predicates. We can then approach the particular perception with a really accurate notion of what we wish to discover from it. We examine, for instance, particular cats to see whether it is true that “cats with white hair are more or less blind”; the point of this examination is that we have satisfied ourselves that the answer to this question will confirm or repudiate some general theory. But our preliminary investigation must not only have satisfied us that the question is a crucial one, it must have put the question in so accurate a form that we can really by perception give to it the answer “yes” or

"no." This is the business of science and explains its success. Behind the vague terms "having white hair" and "more or less blind" must be hidden an extremely accurate meaning—we must know exactly what would satisfy us—we must know under what conditions the relevant defect of vision will appear, etc.; we shall then try and arrange the experiment so that anything unexpected which may happen will be emphasised and become immediately clear.

I think if we bear all this in mind we shall be able to understand the position of the scientist who, when he has arranged his whole experiment in every particular with the minutest care, says: "I defy my senses to deceive me now." Perhaps he is overstating his case; but certainly sense-perception is under those circumstances a very different thing, and certainly this is a way in which knowledge advances.

It would seem, then, that sense-perception is most valuable when we have by previous investigation and thought discovered exactly what we want to know, and this can only be so when we have considered the implications of the answer we want to get, and its bearing on the problem we want to solve, so that we know exactly how to formulate the question which this perception is required to answer. Now in this perception we may, of course, for the purposes of investigation distinguish between two inseparables—the active and the passive elements, the given and the conclusion from what is given. Now the judgment in which this perception issues for the scientist is a judgment of necessary connection answering the question in hand, and if we try to interpose a more immediate and fundamental judgment, trying in a cautious way to indicate in words the mere given prior to the drawing of any conclusion, we are interposing a step which is not necessary to the scientific method and which introduces possibilities of error to which the scientific method is not liable. The point is that if we put to the scientist in such

a case a question as to just what he saw he will no doubt not be able to give a satisfactory answer ; but under these conditions this inability does not invalidate the conclusion he draws from what he saw.

In this way, according to the theory we are examining, judgments issue from perceptions, and through series of judgments of this kind, *i.e.*, judgments asserting necessary connection, we come to conceptions. The simple attributive judgment, derived in some way from casual perceptions, rightly or wrongly plays no part in this theory of knowledge at all. When we do make a simple attributive judgment, we shall find, when we come to criticise it and ask ourselves whether it is true, that that in it which we are entitled to assert can, and in the end must, be stated in a judgment asserting necessary connection. It is only in a judgment asserting necessary connection that we can state what we have discovered about the world without overstating it. If we try to explain in words just how much this kind of judgment does assert about the world, we are transcending the limits of judgment. It is assumed, however, that though we cannot thus explicitly state just what it is that the judgments of science assert, yet we all know what they assert ; that we know what we mean when we say that a triangle must have its angles together equal to two right angles, although we can readily be thrown into difficulties and confusion when we try to explain what we mean by a line or a triangle, or what we mean by space.

Thus when the theory states that it is through judgments and ratiocinations that we arrive at concepts, it means that it is through judgments of necessary connection and inferences that we conceive, and that if in forming a concept we have allowed any simple attributive judgments to weigh with us, then we have been "jumping to conclusions" again ; there has entered into our mental process something which is not thinking and whose intrusion we cannot justify but deplore.

It would seem on this theory that the only judgments which can claim the notice of the logician, as representing fundamental acts of a knowing mind, are judgments of necessity. No doubt I may, and frequently do, in actual life, make attributive judgments. I may say "the door is green" or "there are five shelves in that bookcase." I may be hastily speaking from memory under conditions which I might or might not on consideration be inclined to trust; I may even be intending to deceive. But whatever may be going on in my mind when I make a judgment in this form, there is certainly not going on any act which any philosopher, when in what we may call his theory-of-knowledge-mood, would be disposed to trust as giving him knowledge. If when challenged on the statements "this is green" or "there are five doors in the passage," I really want to satisfy myself or anyone else that the statements are true, I must do some thinking which, if successful, will end in a judgment of the form, "therefore (for the foregoing reason) the door must be green," or "there must be five doors in the passage." Now, by this thinking I have come to know something, and my judgment is a judgment in the fullest sense. I am no longer using a mere form of words forced out of me in an unguarded moment by outside circumstances, but I am deliberately making an assertion, definitely claiming it to be true, as so stated. If Kant is right, no man when asked to make a statement of the truth of which he was certain could make it in any other form. If Kant is right, judgment is the work of the understanding, and the understanding can apprehend necessity and necessity alone.

It seems clearly necessary that those of us who up to this point do lip-service to this theory of knowledge should set our logical house in order. Do we or do we not mean by judgment an act of knowing? Are we to mean by a judgment any statement, however irresponsible, and whatever be the motive or intention of the judge? Or do we mean by judgment the deliberate

statement by a thinking man of what he knows to be true? It would seem that unless when we speak we give close attention to the words and form of statement, and are claiming that our judgments bear their meaning on the face of them and are true as so stated, there is no purpose in logic enquiring into their form. If this is so, then so far is it from being true that judgment must be of the form S is P , judgment can never be of that form; if the above analysis is sound, a statement in that form must necessarily be an overstatement of what we know, and on criticism will be recognised to be such. If we include anything more than this under the term "judgment", can we really maintain that the analysis of other forms of so-called "judgments" has any value for logic? We have been forced to admit that no legitimate process of cognition could in itself have induced anybody to make such judgments. In throwing judgments into this form processes other than cognitive have had their influence, and the change of form has changed the meaning, and the meaning as so changed no man in critical mood would accept.

It is the presupposition of logic that different cognitive acts have different appropriate forms of expression: and that therefore examination of the forms can throw some light on the nature of the acts. If, then, our theory of knowledge shows us that there is no strictly cognitive act corresponding to or represented by certain forms of expression, then those forms of expression can legitimately claim no analysis in logic.

There was an old theory of knowledge based upon Aristotle, or upon the common interpretation of Aristotle, which maintained that in pursuing knowledge we were trying to apprehend substances and to learn to distinguish between different substances by their properties; and corresponding to this theory of knowledge was a logical theory, the traditional logic which has come down to us. Aristotle thought, or was supposed to have thought, that substances were recognised as being the kind of substances

they were in just the same direct way as qualities were immediately recognized to be the kind of qualities they were. For Aristotle, to ask how you recognized a man to be a man and not an ape was just as silly as to ask how you recognized white to be white and not, *e.g.*, circular or immortal. Clearly you must equally be able to recognize a man to be a man and white to be white before you can judge this man to be a white man. Thus on this view the world was thought to consist of substances which one could recognize as substances, and qualities which one could recognize as qualities, and the whole problem of knowledge was to discover what qualities belonged to what substance. Thus asserting any attribute of a subject was the vital act of knowledge, and to examine the various kinds of things which could be said in this form was *eo ipso* to examine the kinds of things which could be known, and the possible methods of coming to know them.

Now Kant pointed out that the struggle for knowledge in the sciences is conditioned by the attempt to find not substances but substance. It is only when we assume the existence of a substance which is one and indivisible that we can introduce an *a priori* and necessary element into our thinking, *i.e.*, the mathematical element, the introduction of which seems to be responsible for the startling success of modern science. When the philosopher asked himself what was the weight of smoke, he gave an answer on the assumption that something remained the same before and after the experiment: and it is by proceeding on this method and on this assumption that science advances. Let us take an instance. The old chemistry reduced all known substances to terms of a number of primary substances which were taken as ultimate, the atoms of which were thought of as indivisible and inexplicable in simple terms. But this result did not satisfy the scientific mind. The method which drives us so far drives us further; the road which leads to substances leads on to substance.

When chemists went further and developed their periodic table of elements, representing the primary substances as stages in a continuous process of emanation, they introduced that *a priori* and mathematical element into their method, which distinguishes the method of modern science from the method which Hume successfully attacked. The only method of differentiation as between the so-called "substances" which will satisfy the scientific mind is one which can explain them in terms of some underlying something which can be thought of as being the same in them all. That method of inquiry which drives the mind to look for substances drives it on until it has found substance: it will not and cannot rest satisfied with the result of the old chemistry, which represented the world as consisting of ultimately heterogeneous substances distinguishable by their properties. This account can only be accepted by a mind which has gone so far and then arbitrarily declines to go further: a mind which has enquired only on the principles whose inadequacy Hume demonstrated, and which has not apprehended or has rejected the methodological contribution of modern science. In other words, nobody thinks, or at any rate ought to think, that he has intelligibly stated the knowledge given him by science unless he states it in terms not of substances but of substance.

No doubt the objection will be made that we are in the name of logic being bullied out of a form of statement which we commonly use, and that we are thereby being refused leave to say nearly all the things which we really want to say. This is quite true: this is the effect of the theory of knowledge which we are accepting. It starts from the observation that we are always in common life allowing enthusiasm to outrun discretion, and trying to say more than we are entitled to say, but yet that we can by training our minds in the discipline of science moderate our enthusiasm and say just what we mean. No doubt we are always pretending to ourselves that we have answered

questions which in fact we have not answered, and never can answer. Our living interest in the world around us is always causing us to ask questions which we cannot solve. We start, for instance, by asking, *Why* do two bodies attract one another? However obstinate we are in repeating the question, we always end by accepting as an answer the formula which governs their attraction, although this is not, of course, the kind of answer we meant to ask for. Our minds are made like that. Whatever the initial question, the answers are always of the same kinds—in terms either of substance or causation or reciprocity. In any case the answer necessarily takes the form of a judgment of necessary connection. No responsible student of nature would stand by an answer of any other kind.

When we go so far we admit that in speaking as if there were individual substances we say more than we are entitled to say: we are stating as for some reason provisionally accepted by us something which we do not fully understand and which we do not know to be true. These statements when analysed no doubt throw great light on the relation between knowledge and action, and that between emotion and intellect. They would seem to occur when an emotion has supervened upon a cognitive process: when, for instance, our desire to know certainly and absolutely has been hindered and eventually displaced by the need or the desire for action. It is to be presumed that a mind equipped to acquire knowledge alone would never make such judgments; while it is clear that minds such as ours, equipped primarily for free action, find it a difficult task to discipline themselves to speak true judgments only. In any case we must not expect by an analysis of the forms of these judgments to be able accurately to determine what we mean by them, since the truth is that in the last resort we do not know what we mean by them. When challenged to say just what we mean we fall back on an assertion of necessary connection, and it is

such judgments and such judgments alone that logic can properly examine.

It seems that Bradley must have appreciated this in his chapter on the use of symbols in judgment, and in the passages where he asserts that one idea and one only is involved in judgment. The account he is there giving of judgment seems to be something like this. In experience we are faced with a single whole; this whole we analyse into parts to which we give names; then in judging we state necessary relations between the parts which have arisen in our analysis: the parts are in a sense ideal, and the relations we assert are relations between ideas; but the nature of the ideas, and therefore of the relations between them, are to some extent determined by the nature of the real whole we are analysing, that is to say, there is a sense in which the relations "do not exist between the symbols but hold in the symbolized." If we just attend to the symbols themselves, we shall not "understand" the judgment or "follow" the reasoning: it is only when we cast our eye on the reality symbolized that the judgment has a "meaning" for us. From series of judgments of this kind arise conceptions. Reality was given us undivided; but in being given it was analysed by our faculties into such parts as our faculties could by their special nature apprehend. It is then the task of the series of judgments which form the process of conception to put these parts together again into a whole which as nearly resembles the original unity as may be. Now in each of these judgments we are talking *about* the reality, and with each judgment our "conception" of the reality grows more definite and as we might say more "adequate" or more "understanding." In another sense of the words we are talking *about* mental symbols or *ideas*. No doubt it may appear a clumsy way of expressing an apprehended fact in the real world to use a form of expression which appears to be talking about mental symbols, but if on careful analysis we find that that is the way

in which our mind works, that it is only when we speak in terms of such symbols, and just *because* we are using such symbols, that we can discover implications and use our capacity to infer, it is no use our complaining that the way of knowledge is a complicated way. It is rather our task to examine the way in which the process works, in order to understand it and to be able to prevent it getting out of hand.

Thus Bradley is emphasising two things about judgment. The first is that all judgment is attempting to state a fact, a fact being taken to be something real independently of our apprehending it. The second is that judgment can by its very nature, and owing to the nature of the mind, necessarily only state a fact *indirectly*. This character of judgment Bradley sometimes expresses by saying that "all judgments are hypothetical." This form of expression is unfortunate, since logic has always referred to a particular kind of judgment by this term, and it is clear on examination that all judgments are not hypothetical in exactly the sense in which the hypothetical judgment, strictly so-called, is hypothetical. But if we are right, what he really means is that judgment can necessarily only state a fact indirectly; that is, it never seems to mention the thing which it is really trying to talk about. Therefore, if judgments are to be understood, we must all of us appreciate that judgment labours under certain difficulties and really means more than it seems to say. If this is what is meant by "hypothetical," namely, that when a judgment is made certain implied conditions must always be understood before the meaning of the judgment can be apprehended, the statement is unexceptionable. But if it be meant (as perhaps Bradley did not mean, though his words are open to this interpretation) that all judgments can be reduced to the hypothetical form, the conditions underlying all judgment being explicitly stated in a protasis, then the term is inadmissible. For this would be expecting judgment to state for us the relation

between judgment and the reality judged about, thereby *per impossible* stating a fact directly; it would be expecting judgment to tell us what reality is like when it is not being judged about, when by the nature of the case it is being judged about. If we are going to say that all judgment is hypothetical, we must remember that we do not mean by this that all judgments can be reduced to the hypothetical form, and it would perhaps be wiser to find a fresh term to distinguish the hypothetical judgment strictly so-called.

The point for us is that Bradley maintains that judgment can only state fact indirectly and that certain conditions are always implied whenever I judge or infer. Now any two people may accept it as a condition of the conversation that neither of them need trouble to use words accurately, but both may speak as loosely as they like. This would be a special case, and no logician would imagine that he could throw much light on the problem of knowledge by examining the forms of their statements. But if it be agreed, as we normally assume it to be agreed in philosophy and the sciences, that words are to be used accurately and that any speaker is assumed to be saying just what he means, no more and no less, then the judgments made are the judgments in which logic is interested. These judgments, according to Bradley, should in the end be reduced to the form "reality is such that there are five doors in the passage," or, "if reality is what I take it to be, there are five doors in the passage." Now if we can make good two modifications of this doctrine, it will be seen that Bradley is maintaining the same view of judgment as that which we offered at the beginning, viz., that all judgments are in the end assertions of necessary connection.

The modifications are these. Firstly, the form "reality is such that there are five doors" really means "it follows from the nature of reality that there *must be* five doors in the passage"; in other words, the judgment "reality is such that . . ." is a

veiled statement of necessary connection. Secondly, as we have urged above, "reality is such that . . ." is a mere form of words with no definite thought behind them, in that it is attempting to state the conditions presupposed in all judgment—a task which clearly transcends the capacity of judgment itself. Bradley thinks that in judgment we must be asserting a necessary relation, but he seems to think that the evidence for the necessity of the relation can be expressed in three words. Be this as it may, we may fairly claim that Bradley, though he started by trying to believe in judgments of the form "there are five doors in the passage," or even of the form "Fire!" or "Wolf!" ended by being forced to admit that the only genuine judgments are judgments asserting necessary connection.

We must now in fairness consider the case of the historical judgment. It will be said that our case has depended on taking instances of judgments, the evidence for which in the end lies in the physical sciences, and that therefore it is not surprising that we should soon be thrown back on the scientific form of judgment. But what of the true historical judgment? "Cæsar crossed the Rubicon in 49 B.C.," or "the Battle of Waterloo was won on the playing fields of Eton." Would not a historian stand by judgments of this kind? We may here put a dilemma. *Either* history is a science, and proceeds simply by inference like any other science. If this is so, the historian will, when he challenges himself on one of these statements, set out his evidence in the form "therefore, for these reasons, Cæsar must have crossed the Rubicon in 49 B.C." Then he is admitting that he only states what he can prove, and what he can prove is that "Cæsar must have crossed" on certain presuppositions; what he is really asserting is the necessary interconnection of the conditions and Cæsar's action. *Or* history is not a science, and the historian is asserting more than he can prove. Now if he is doing this, then, to say the least of it, we are doing no good by taking him sentence by sentence. Every statement he makes

will be conditioned through and through by the context, and we should never expect any single statement to carry its meaning on the face of it, nor should we expect the conclusion of an argument to be stated in a single judgment. The value of such a judgment would not be that it stated a truth but that it recalled to our mind the argument. Probably it would never occur to anyone in the world to quote the remark about the playing fields of Eton as an instance of a true judgment. Its value, if it has any value, is that it reminds us of certain aspects of the English character which it is important to bear in mind when studying English history. Its meaning is so loosely related to its form that it might have been stated in anyone of several forms without changing its meaning. We may call it a judgment if we like, but it is not a judgment of which logic can with any profit take cognisance. If history is not a science we shall never be able to understand the meaning of a historian or follow his argument, or glean any light as to the way in which he arrives at his conclusions, by attending to the forms of his statements. One statement will *just not* follow from the statement before, and our estimate of his argument will depend upon "reading between the lines." If this is so the forms of his statements are not a suitable field for logical enquiry.

If this be so, we may claim that it is only judgments of necessary connection which can properly claim the attention of logic. Even if it may be granted that there are other methods of enquiry than the scientific, which looks for such necessity, it must be urged that in the case of these methods there is no value in a logical enquiry into forms of statement, since these methods cannot achieve, and do not even aim at, exactness of statement or cogency of argument. In so far as they do aim at such exactness or cogency they are taking to themselves scientific method, and their judgments really assert necessary connection.

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IV.—THE UNITY OF THOUGHT.

By J. L. STOCKS.

I.

THE unity of thought is, perhaps, an ambiguous phrase. It is certainly a theme which has been treated from a number of different angles. Historically, it first received treatment from logicians as a problem of determining the forms of thought, conceived in a way which is still generally regarded as the distinctively logical attitude to the question. Thought is shown to be one as repeating everywhere in the various fields of its exercise a comparatively small stock or store of forms. Assertion is analysed into subject and predicate ; its varieties—categorical, hypothetical, universal, particular, and so on—are determined ; kinds of subject and kinds of predicate are distinguished ; the different possible relations of subject to predicate are explored. Then the more complex types of assertion called inferences are passed in review ; and these are shown perhaps to depend on a single dominating type or form ; thus arose the theory of the syllogism and syllogistic demonstration. On such lines as these, logic early made rapid progress, and its precocious maturity in the pages of Aristotle still evokes surprised admiration from the modern student. He may well see errors and shortcomings in the Aristotelian treatment, but on this side he will probably feel that modern logic has made no decisive advance.

This unity of form in the diverse manifestations of thought may be called the *Formal or Analytic Unity of Thought*. A parallel

may perhaps be found in Aristotle's great biological treatises. In the treatises on the *Parts of Animals* and on the *Movement of Animals*, he attempted a similar service for the animal kingdom, showing how "Nature" works everywhere on the same lines, and how movements and structures which to the first view have little or no resemblance, are yet in principle, identical. But in biology, Aristotle also undertook the complementary task of exploring the varieties of animal life, and of showing how, by their differences, the various species supplement one another and all together build up a system or kingdom. Some such complementary effort seems to be required equally in the study of thought—a treatment which will follow thought into the different spheres of its activity, which will justify the dispersion and specialization by exhibiting each special function as the indispensable component of a whole or system wider than itself.

Greek thought gives us hardly the beginnings of any such enquiry. Though Aristotle ranged widely in his treatment of human nature and everywhere regarded thought as central; though he reviewed not merely science and philosophy, but also rhetoric and poetry, ethics and politics; yet he made no very determined or consistent effort to exhibit each of these as an integral part of a whole. He did, no doubt, develop certain leading ideas which implied at some points a pretty definite relation between two or more of these activities; but he never faced directly the general underlying problem, nor did he even state it in general terms. It is not until quite modern times that attempts have been made to determine the unity of thought in this sense, in Germany, by Hegel and the German idealists, and in other countries under their influence. In our own times, the Italian idealists have handled this theme with admirable dexterity: it constitutes perhaps the central feature of Croce's system. Mr. Collingwood's recent *Speculum Mentis* is an able and fascinating continuation of this tradition,

This may be called the *Systematic or Synthetic* treatment of the unity of thought.

In these two cases philosophy is engaged in exhibiting the underlying unity of things that are, on the face of it, quite different and distinct. It is convicting thought of a unity of which it is not, and need not be, aware. They have also this in common, that the unity which each seeks to discover and exhibit has no special reference to time : on the face of it these may be called timeless or static unities. But there is also a unity which thought claims and of which it is conscious ; and this unity has primary reference to time. Unity in this sense is maintained when a discussion or description is continued without interruption. It is claimed in most cases for a book by its title. It is broken when we are conscious of " changing the subject " of conversation. It is expressly disclaimed for a book when it is described as a collection of short stories, or given such a title as " Essays and Reviews." Obviously such unity has its varieties and degrees. The treatment may be loose and discursive, or compactly argumentative. A narrative has one kind of unity and a theoretical disquisition another. A biography guarantees to include anything of importance that befel its subject as he moved about the world. A history excludes nothing significant that falls within certain limits of space and time. And so on. But every discourse, whatever its subject and character, claims unity, and, so far as it is successful, achieves it. And the unity which it claims and achieves is something more than mere continuity. For it is evident that a series of statements may be continuous, in the sense that each is in effective contact with its neighbour on each side, without possessing unity in the sense intended. We may say perhaps after Aristotle that a beginning, a middle, and an end are elementary requisites. But though continuity is not the whole matter, it is a very important ingredient. Unity in

this sense involves continuity and presupposes *duration* as a fundamental feature of thought.

It is the unity of thought in this last sense with which I propose to deal in this paper. I would call it, in contrast to both of the two kinds of unity described above, the *Conscious or Dynamic Unity of Thought*.

II.

Thought in its more elaborate forms is met chiefly in books. And in books we see words, sentences, paragraphs, chapters, lying side by side. The time-factor seems absent. The problem of the relation of one part to another seems as simple as the problem of determining the distance of one place from another on the ground. We are apt to forget that this spatial relation between words and sentences is only the symbol of the temporal relation between successive phases of a continuous act or process of thinking; and that the temporal sequence itself is not ultimate, but depends upon certain logical relations which it at once masks and reveals. Thought is movement, and movement takes time; and though the real with which thought is pre-occupied may itself be involved in time and change, yet thought does not depend for its success on repeating or reflecting in its own movement and duration the movement and duration of its object. The thinking has its own pace, phases, and development, which are not those of its object, even though they depend partly—even perhaps in a sense wholly—on them. Familiarity with the written word makes us forget all this. When those of us who are unmusical look at a musical score, we see it only as a cunning device for transmitting the commands of an architect in sound to willing executants; we know that for us at least it is dead and silent until these commands are carried out. We are not tempted to think of the beginning as contemporaneous with the

end, or of the time occupied by the performance as an extraneous and accidental factor. Those who read scores as we read books perhaps think differently. But we are all familiar in this way with books. And our familiarity with books tends to make us forget that in the written word we have similarly only the lifeless symbol of the living thought, and that the living thought is essentially a process, a movement.

There is another illusion, not less fatal, which the printed page tends to encourage. A book consists of complexes of words called sentences, neatly separated by small black dots from one another. We are tempted to see in this method of exhibition a not-inadequate symbol of the real texture of thought. Thought consists, we say, of assertions : or we borrow a phrase from our memories of elementary logic and call the proposition or judgment the "unit of thought." As walking involves a series of steps, each clear and well-defined to the view, and on any given walk it would be possible to say precisely how many steps we had taken, so thinking is a succession of assertions, which can be separated and counted and catalogued. Within the single assertion or proposition the time-element is regarded as wholly absent ; and thus somehow a complex which takes time is regarded as made up of units which are timeless. But in truth this single assertion or simple proposition is little more than a myth. There is no significant statement within which a plurality of assertions cannot be distinguished ; and in many important statements the most contentious feature (*i.e.*, the logically central feature) is an adverb, a preposition, or a mere emphasis, which does not look like an assertion at all. Thought is, in fact, continuous assertion, in which steps and stages are only discriminated somewhat roughly and arbitrarily by a convenient fiction, with the help of established linguistic forms. There is, therefore, no unit of thought : for thought is an infinitely divisible continuum. Thought is judgment rather than judgments, assertion rather than assertions.

In fact, to speak of a judgment, an assertion at all is misleading unless it is remembered that what logic thus isolates is only a relatively substantial feature of such a continuum, never a completely self-contained entity, and that the time-factor is an essential ingredient of it.

The series of statements then which constitutes a book symbolizes, and so far as it is successful, enables the reader to recreate for himself, a continuous and uninterrupted movement of thought. But its continuity is only one side of its unity. A book is commonly said to have a single subject. The *Origin of Species* and the *Wealth of Nations* justify their titles and maintain their unity, so far as the movement as a whole and in every changing phase has constant reference to a single problem. The use of the word "subject" implies that the book, as a whole, may be regarded as a single assertion or judgment in which a highly complex predicate is created and exhibited. I see no objection to so regarding it, and no ambiguity in this use of the word "subject." I suspect that those who detect an ambiguity are led to this by having previously expelled all notion of process from judgment. Thinking of judgment as a momentary intuition, they suppose that its content must be present as a whole simultaneously to mind. They find it difficult to conceive of a state of mind in which the whole of Darwin's or Adam Smith's contentions are grasped simultaneously and seen each in due relation to the rest. They find themselves, therefore, bound to deny that the *Wealth of Nations* or the *Origin of Species* is a judgment. If, however, passage and process are essential features of all assertion, the distinction is at most one of degree; and often, certainly, it is not beyond the wit of man to sum a whole treatise effectively within the limits of a single grammatical sentence. I think, therefore, that the notion of the subject of a book ought to be taken quite seriously and literally, as implying the correct view, that a series of statements which is unitary, owes its unity to the

presence in each and all of a common subject, as well as to the continuity of the movement in which that common subject receives its complex determination.

III.

Suppose now that we have before us a document, recording a train of thought so unified, dealing continuously with a single subject. It might be the description of a battle, the analysis of a statesman's character, a treatise of political economy, or a text-book of geometry. In any case it will be set out in a number of discrete statements, with pauses more or less marked between each. The main question I wish to ask is how the relation between these semi-independent entities is to be conceived. That they somehow represent a continuous movement of thought, and preserve a constant reference to the same subject, we can now take for granted. But the problem is how precisely these things are achieved. Of course, it may be that no general answer is possible. This seems to be the view of Prof. Bosanquet (*Logic*, I² 82). He emphasizes the point that judgment breaks up into judgments, and admits that in consequence, we cannot speak of a judgment without a certain obscurity, an obscurity which is only partly resolved by saying (as he does) that any extent of judging activity may be regarded as one judgment, which can be summed up in a single proposition. But "the question," he says, "is one of continued identity, and therefore must be dealt with as concerning organised wholes or systems." By this he means, if I understand him rightly, that the unity and consecution of thought will be different in different spheres according to the nature of the subject dealt with in each, and that no general answer is possible to the question put above. We should, of course, expect to find far-reaching differences between the con-

secutiveness of a description and that of a geometrical demonstration ; but it is not self-evident that the general question of the consecutiveness of thought cannot profitably be raised. Anyway, it is the general question that I am here concerned with.

Let me first put three possible views as to the relation between the successive propositions in a continuous discourse.

It may be supposed, *first*, that each is *external* to every other. Admitting that all have in common the mark of contributing to the definition of a single subject, it may yet be held that, apart from repetitions and redundancies each makes a distinct contribution, and is so far self-contained, an atom of fact or truth. But this clearly will not do. The various statements are obviously inter-related, and they are made by a mind aware in general of their inter-relation. Even the loosest unity in a discourse requires that what is now said should have regard to what was said before ; and in fact, by the use of particles and in other ways, our speech bears constant evidence to the watchfulness of the mind in this respect, to its persistent effort to indicate the nature of the transitions through which it passes. Further, it is easily shown in detail that the propositions asserted in a continuous discourse are not mutually exclusive ; they may and commonly do overlap. A description of a battle, for example, may well begin by stating in general, the course of events and the nature of the issue, and subsequently expound the detailed movements by which this result was reached. Euclid similarly begins by announcing the proposition to be proved, before he proceeds to make the construction and develop the reasoning which proves it. A merely external relation, then, of the several attributions is untenable. The common subject is not the only bond of union between them.

A second possibility would be to suppose that the series is *cumulative*. It might be supposed, I mean, that all the preceding

propositions are carried forward at each step, and the new determination added to them. The series would then be regarded as the progressive determination of a single subject, which reached its natural end when the subject was fully or completely determined. Absolute completeness no doubt is unobtainable, but a relative completeness on the scale adopted is quite conceivable. But this view again does not seem wholly satisfactory. If it were true, then any such series would advance from simple to complex. The burden on the mind of the reader would increase progressively as he turned page after page, and fatigue would surely overcome him, in a discourse of any length, long before he reached the end. Books would be much shorter than they now are, if the writer in composing them, and the reader in reading them, had at every moment to sum all that had been said before, and make an addition to it. It is obvious, I think, that the end of an argument or of a book does not, in fact, bear all this weight. Experience suggests rather that in an argument, as in a story, the maximum complication comes near the beginning, and the latter stages are comparatively simple and straightforward.

A third possibility would be to regard the series of propositions as symbolizing a *continuous movement*. Its continuity, it may be suggested, is preserved in that something is always carried forward from the preceding; but it is correctly called movement because there is real transition, because something is always being left behind. And further, terms appropriate primarily to movement, like "pace" and "direction," spring to mind naturally in following and describing the sequence of thought. But this view again is inadequate. Thought is at once more free and less free than the metaphor of movement suggests. A movement is defined, as Aristotle says, by its starting point and its goal: given these, the rest is determined. There is no varying the order of the houses you pass on the road from Manchester

to Stockport. But even the most precise and exacting argument leaves something to taste and art in its exposition; and in poetical or descriptive writing the sequence would seem often a mere caprice of the composer, if it were not that it is felt to have an æsthetic justification, that in it especially the writer is felt to express and vindicate his artistic mastery. On this side then thought is more free; if it moves from point to point through infinite intermediates, yet those intermediates are themselves chosen. Unlike moving bodies, moving thought is emancipated from the tyranny of the straight line. But the metaphor ascribes also, as I said, too great a freedom to thought. For a movement may start anywhere and end anywhere. All places are alike to it, each position perfectly co-ordinate with every other. But in thought there is system and subordination. It may not affect the argument whether you say "A is B because C is D," or "since C is D, A is B," but it does matter whether you say "C is D because A is B," or "A is B because C is D." Certain things are dependent on certain others, and the relation is not reversible at will. These interdependencies limit the freedom of thought after a fashion to which movement offers no obvious parallel.

The last of my three suggestions, then, fails me. The unity of a discourse refuses to accept any of the three formulæ offered. And yet each formula has its truth. The successive propositions are to some extent mutually exclusive and independent of each other. Reflexion may show that, if you deny this one, you must deny that one too; that if you accept this, you must also accept that. Here and there the writer or speaker will expressly indicate such interconnections. But such patches of explicit inference are rare even in theoretical writing. For the most part the writer contents himself with a sequence of apparently independent assertions. These are, no doubt, in fact, connected by other bonds than inferential necessity. A biography, for instance, must

conform in a general way to the time sequence of the events which it records and unifies. Some guiding sense of these relations must certainly be presupposed in the thinker ; but in general each proposition seems to be drawn direct from a renewed inspection of the subject under discussion. It is in no way constituted by its predecessors, though its appearance at this point in the sequence may be occasioned by them. The new-comer is like the domino which continues the line : an independent entity, but able to occur just there because it fits on at one end to what was there before.

But this requirement that the new-comer should fit on, forces the recognition of a certain cumulative factor. For obviously it is not merely the last thing said that the continuation must fit. Where would be our security in that case against repetition ? And how could there be a middle or an end, or indeed a whole in any intelligible sense, if this is denied ? If we ever ended, it would be only because we had no more pieces to play. No : in each sentence something is added : the effect is cumulative. We need only qualify that by noting that that to which the new is added is not itself as such present to the mind. So great a strain as that is not put on our memory. When all goes well, the reader or writer does not need distinctly to recall anything he has written or read before. What governs the utterance or understanding of the present statement would seem rather to be some kind of general impression of the whole as already determined and as requiring further determination.

And finally, it is impossible to deny a certain appropriateness in the metaphor of movement. As we read or think we are traversing a path, we are on a journey. Things do fade into the distance and get left behind. Never perhaps once for all, as in travelling : for at any moment something that has been passed, that has become mere background, may be recalled into the foreground ; and it does not simply reappear with its former associates, as

objects will when you come back to them on the ground. Thought is free, as we have seen, and may bring together at any moment things formerly far separated. But though thought has its own laws and needs perhaps one or two extra dimensions to explain them, yet its laws are, to some extent, the laws of a movement.

IV.

These three metaphors then are all false and all true. A typically philosophical result, you will say, especially as they have been shown to be more false than true: and you may ask why we should waste our time on obviously inadequate metaphors, instead of facing the question directly. The answer to that is that thought cannot be described without metaphor, and that these are metaphors which we can hardly escape using. It is some advance to perceive that there are alternative metaphors available, that each has its defects, and that the merits of one may be used to supplement the deficiencies of another. But I had also a further object in undertaking this analysis. I wanted to recommend to you what appear to me to be two complementary truths, which I will now lay before you.

The first is the reality of the time-factor in thought. On that point, I think I have already said enough. I would only add now, that if this is conceded, it must be untrue to say with Bosanquet that the ideal of thought is a judgment in which the whole is predicated of itself. For, so far as I can give any meaning to such an ideal, it is a meaning which excludes process and development altogether. Nor can I see that it is a legitimate escape from this difficulty to postulate at the outset with Mr. Joachim (*The Nature of Truth*, p. 76 and p. 168), that truth and thought are ideally, or in themselves, timeless, and then without apology to attach to them predicates which have no meaning apart from time.

The timeless actuality, which is for him the only significant whole, is, he tells us repeatedly, a process, self-fulfilling and self-fulfilled. It manifests itself in movement, and its movement or self-fulfilment is truth. Of this actuality, we are told, "the temporal process is nothing but a fragmentary and arrested portion." Thus movement must be denied here, as the word "arrested" plainly indicates, in order to be asserted there. No doubt, there are metaphysical reasons for this procedure. But it seems to me essential to maintain that every judgment is finite and limited. Every judgment would require infinite supplementation to express the whole truth about anything. And this supplementation could only be given by an infinite continuation of the judging activity in an infinite series of propositions. Truth is always less than the whole truth. If this were not so, we should never be able to stop speaking or thinking without grave dissatisfaction. But, in fact, the finite and limited assertion is the response to a finite and restricted demand. If every judgment aimed at all truth, no judgment would achieve any truth. The unrestricted aim is contrary to the very nature of judgment. Thus in Mr. Joachim's "timeless actuality," which is also a living and moving whole, judgment goes the way of movement. It is transferred there only to vanish and disappear. It becomes an unattainable ideal which is little more than a negation of the constitutive features of the actual. The logician, at least, must hold to the finitude of judgment and the reality of the time-factor.

But there is another side to the matter. Thought is a process and takes time; and its unity is the unity of a temporal process. The metaphors by means of which we tried to describe this unity broke down mainly because thought, in its transitions, has not merely to make the transition, but also to be aware of the transition which it is making. The series of propositions is required, not merely to present a certain unity to memory, or to

an outside spectator, in the biographical or autobiographical judgment : it has also at every point in its development to express and possess its own unity. It is therefore a condition of the unity of thought that thought shall continuously, in some sense, rise superior to its own temporal character. My last task in this paper is to attempt to give some analysis of the fashion in which this requirement is in practice satisfied.

Let me first quote an *obiter dictum* of Mr. Bertrand Russell's (*Analysis of Mind*, p. 164). "The study of any topic," he says, "is like the continued observation of an object which is approaching us along a road. What is certain to begin with is the quite vague knowledge that there is *some* object on the road. If you attempt to be less vague, and to assert that the object is an elephant, or a man, or a mad dog, you run a risk of error. But the purpose of continued observation is to enable you to arrive at such more precise knowledge." Mr. Russell's suggestion is, I take it, that thought begins with a vague vision of its object, to which, by degrees, by means of something which is, or corresponds to, continued observation, it succeeds in giving a more determinate form. By "the study of a topic" is meant the attempt to grasp a theoretical problem like that of memory, the problem with which Mr. Russell was actually faced when he wrote those words. Thus "observation" is metaphorical. It is not meant to imply the use of the eyes or of memories arising from their use. What Mr. Russell suggests is that the mind of a student grappling with such a problem is from the beginning and throughout its advance in a kind of perceptual relation to its object. It is this suggestion that I wish to adopt and develop.

However much I help myself out with metaphor and combinations of metaphor, I find I cannot construct even a partially satisfactory account of the process which is thought, or make sense

of its unity, without supposing that the mind has throughout a contact with its object which is independent of the momentary assertion, though it is also the ground and source of each assertion and is continuously modified and developed by each assertion. In that contact the object is presented as an individual whole of unexhausted, and, in principle, inexhaustible possibilities, among which selective attention picks out now this feature, now that, for actuality under the forms of judgment. The focus and centre of the mental act is always a proposition, but the proposition has concrete meaning and value only as the focus of this whole, out of which it emerges and into which it sinks back as a new proposition succeeds it. The proposition disappears, but its work remains. The felt or intuited whole gains definition and coherence as the process continues ; and, in consequence, the proposition, which is its momentary focus, is grasped and " placed " with increasing ease and distinctness. Hence memory, in the sense of the recall or revival of the previously presented, plays no essential part in thought. It is not necessary, it is not even advisable, that one should, in this sense, remember what was said before. Such recall or revival belongs rather to the pathology of thinking, and is occasioned by the failure to achieve continuous and consistent development of the object. The operating control in the normal development of thought is a picture of the whole with which thought is occupied, on which each preceding proposition has left its mark.

This, then, is the principle which I wish to advance as the necessary complement of the principle of the reality of the time-factor—that the unity of thought in its successive stages is made possible by the presence at each and every stage of a controlling intuition of the whole which is being progressively revealed and defined. It may be called the principle of the *Intuitive Basis of Judgment*,

With the aid of this principle it seems to me appreciably easier to understand many features of the thought sequence as it is presented to memory and introspection, or in such continuous discourses, whether narrative, descriptive or argumentative, as I have had throughout in mind. I take it for granted that *mere* intuition is, as Kant says, blind, *i.e.*, non-existent; that it effectively exists only in the act of judgment, as focussed on a proposition; and that, as so focussed, the intuited is only partially or one-sidedly actualized. It follows that even the physical description of an object which seems to be presented as a whole to sense involves the gradual development of a whole which is not, as such, so presented. Thus, even here, the whole which is intuited as the basis of the series of assertions is not identical with that which is seen. This whole is made, not found; constructed, not received: its progressive development excludes the notion of an absolute given. But if in this extreme case the object is, after all, not presented, there is the less difficulty when we turn to more theoretical regions in which the object seems not to be presentable at all. For in all cases it is presentation to thought that is aimed at and achieved in judgment, and with that, the so-called presentation to sense has no necessary connexion.

But where sense is excluded or remotely distant, the task of thought and exposition is undoubtedly made very much harder. Where assistance from the senses is not available, it is harder to fix the object of thought at the outset, and harder to keep it steadily in mind. Hence in theoretical discussions the preliminaries are very troublesome. The essential aim of these preliminaries is to define in outline a whole of intuition, the further possibilities of which can be subsequently explored. It is easy to fail in this altogether, with the result that no real question is ever asked and no real judgment made. The discourse

then becomes a series of analytic or trifling propositions in which there is no real advance, a more or less elaborate begging of the question. That is one alternative. The other alternative, equally fatal, is that for lack of an adequate basis in intuition, each proposition has a damaging vagueness and ambiguity, and the series as a whole lacks the unity which it claims. But if its failure is more complete, at its best and most successful theoretical discussion may claim to achieve a fuller and more complete unity than any other. The difficulty of theoretical discussions to a reader is due less to the complication of the argument than to the difficulty which the unpractised reader experiences in framing the intuition of a whole without the aid of sense. And the lessening resistance which the opening passages of any discourse, as it develops, offer to the understanding of any reader or hearer is due to the gradual disappearance of the uneasiness caused by the absence of a whole of intuition sufficiently developed to give life and significance to the propositions enunciated.

I hope it is not necessary for me to illustrate my thesis any further. I claim that something can, after all, be said as to the nature and conditions of that conscious unity which is an essential feature of all continuous thought ; and that the principles which I have laid down apply to thought in all its departments and applications, in a work of science or philosophy, a novel, a play, a poem. In all alike the temporal series of assertions is held together by this intuited background. It is the scene in which the plot develops. And as for the plot in general, the plots of all discourses, descriptive or theoretical, narrative, dramatic, or poetical, seem to me to have much in common. There is first the setting of the scene -- what dramatists call, I believe, the exposition. Then there is the tying of the knot. The whole, half defined, constitutes a problem. One element conflicts with

another, and the consequent demand for further articulation which will solve and reconcile, produces tension and excitement in the mind of the reader. Complication may succeed complication ; but eventually some pretence of a solution must be offered. The knot must be untied, and the various strands straightened out. Then the question is answered, the story done : the curtain falls.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C. 1, on January 4th, 1926, at 8 P.M.*

V.—TIME AND ITS RELATION TO UNCONSCIOUSNESS.

By C. A. RICHARDSON.

I THINK I ought to begin this paper with an apology for its incompleteness and general "sketchiness." For various reasons my preparation of it has been necessarily hurried, and I have not been able to deal with the topics considered with the detailed fullness which their importance justly requires. I will, therefore, crave the indulgence of all those who may read what I have written and ask them to regard it not as an attempt to treat in any way adequately the problems which are raised, but rather as a mere starting point from which discussion may more or less profitably proceed.

I cannot make clear the point of view from which I approach this matter without giving some account of what, as it seems to me, are the essential characters in the nature of Time. In putting forward, very tentatively, the opinions which I hold, I will try to be as brief as possible, though I fear that some of the things I have to say have been repeated *ad nauseam* by others; but it is impossible to omit them without obscuring to some extent the position which I am taking up.

I start, as always, from the unity of the individual experience. It is unnecessary to make a detailed enquiry into the precise nature of this unity. It is probably sufficient for our purpose if it be granted merely that an individual experience is *some* kind of a unity, i.e., is not simply a random collection of

particulars connected by no more intimate link than a verbal copula, but a whole of which something can be predicated in addition to the predicates of the particulars which compose it. No doubt even the more extreme philosophical atomists of the period would be willing to grant that experience is at least a unity to that extent. Secondly, many, though by no means all, philosophers would also be willing to concede that within this unity can be distinguished two factors, entities or aspects (call them what you will) commonly termed respectively "subject" and "object."

In connection with most of what follows it will be unnecessary to make up one's mind definitely as to the existence and (if it exists) the nature of this duality; it will generally be sufficient to consider experience from the point of view of its unity. I should, however, like to make quite clear at this point what meaning I attach to the term "object" (of experience) when I have occasion to use it. I can do this most simply by a single example. In the experience described by "I see a table" I call the actual sense-data which are perceived or presented the "object," and not the table, whether this be regarded as merely a logical entity, such as a class of sense-data, or as a definitely concrete entity in addition to and beyond the sense-data which "manifest" it.

Without arguing, then, as to whether an experience comprises a subject as well as an object or not, we will agree that it is at any rate a unity made up (at least in part) of a group of particulars such as sense-data, thoughts, volitions, images, etc., or (if we analyse by another method) events. We will not enquire whether the plurality of particulars is the more fundamental or the unity comprising them (in which case the particulars would be but abstractions), but we can probably assert without much fear of contradiction that the particulars are connected within the unity by some kind of relation which gives to the latter an

important quality, termed "continuity," the nature of which we understand, because we experience it, but which we do not find it easy to define with precision.

Our concept of time is derived from the particulars which are comprised in our experience. These particulars exhibit a certain kind of quality, and stand to one another in a certain kind of relation. I shall not attempt, nor is it necessary, to define the quality and the relation. It is sufficient to name them, for we all understand what they are even if we cannot describe them exactly in words. The quality is "duration" and the relation "succession." We call these the "temporal" characteristics of experience. Succession is the kind of relation which is inherent in, or generates (according to the way you look at it), a series. The particulars within each individual experience do, in fact, form a series in virtue of this peculiar relation of "succession." In systematizing our temporal experience, however, we generally think, not in terms of the particulars themselves, but of what we call "instants." The "instant" can be derived from the particulars by a quite valid logical process. One such process is Dr. Whitehead's method of Extensive Abstraction.

In each individual experience, then, there is a time-series of concrete particulars, or, derivatively, of instants; and when we say that anything is "in time" we mean nothing more than that it is a term in such a series—that is, ultimately, that it possesses the quality of duration and stands in the relation of succession to (*i.e.*, is "before" or "after") something else.

These private individual time-series are not independent of one another. Each of us finds in the course of his communication with his fellow beings that any instant in his own particular series "corresponds" to, or is correlated with, one, and only one, instant in every other private time-series. On the basis of this correlation we construct the public time-series and the convenient

concept of a universal Time. Each instant of the public series is a class of correlated instants in the many private series.

At this point I want to emphasize, what has been repeatedly pointed out by others, that the concrete reality is not the public time-series, but the many private time-series within the various individual experiences. Now let us consider an individual experience. Any two portions of it stand in the relation of succession to one another; each *portion* of it is, therefore, as we say, "in time." But the individual experience *as a whole* (i.e., as distinct from portions of it, namely the particulars which it comprises) does *not* stand in the relation of succession to anything else. It is, therefore, not temporal or "in time." On the contrary, time or temporality is in it.

Let me develop this point a little further, for it is the essential feature of that view of the nature of Time which I am trying to advocate. Let us denote the instants of the various private time-series by small letters a, b, c , etc., a^1, b^1, c^1 , etc., and the corresponding instants of the public time-series by capitals A, B, C , etc. Again let S be the relation of succession and R the relation between two "corresponding" instants in different time-series. Then we have aSb, bSc, a^1Sb^1 , and so on. Also aRa, b^1Rb^1, cRc^1 , and so on. Now it is clear that the relation between a and b (say) is different from the relation between a and b^1 . In the first case the relation is S ; in the second it is a relation defined by aSb and bRb^1 together, or aRa^1 and a^1Sb^1 together. Hence a and b^1 are not *temporally* related in the fundamental sense. It is true that we can frame a conventional definition in virtue of which we may say that an instant in one time-series is after an instant in another time-series, for we can assert (arbitrarily) that b^1 is after a if the instant in the public time-series with which b^1 is correlated is after the instant in the public time-series with which a is correlated. That is, we may say that b^1 is after a , *by definition*, if aRa, b^1RB and ASB .

But it is evident that this must be a convention, and that b^1 is not "after" a in the sense in which b is "after" a . All of which is simply a symbolic way of stating the fact that whereas any two portions of a given individual experience-whole are related to one another in the peculiar way (immediately experienced) which we call temporal, two experience-wholes are not themselves so related.

I will endeavour to make this clearer by a spatial analogy—there is, indeed, an exact parallel between space and time in this respect. If we take the "spatial field" of a certain experience-whole we can say that one part of it is "above" or "below" or "to the right of" or "to the left of" another part, and these terms signify for us a special type of relation (named "spatial") which is immediately experienced. But we cannot say that the complete spatial field, as a whole, is "above" or "below" or "to the right of" or "to the left of" anything else. Space, like time, is within the individual experience-whole and not *vice versa*—and since space and time are but abstractions from a single other abstraction "space-time," we may go on to assert that experience is not in "space-time" but "space-time" is, *per contra*, in it.

Every experience, then, comprises a time-series within it, but is not itself a term in any time-series. If this be accepted, it appears to me to throw much light on the nature of individuals like ourselves, and incidentally to show that some of the most perplexing problems arising in connexion therewith are really illusory. In particular, there is the problem of identity or maintenance of permanence through change. This hoary puzzle disappears when we cease to regard time as a kind of "externality" within which we have our being. We, as experience-wholes, must not be considered from a temporal point of view. We are not in time; time is in us, and hence we are standing examples of the concrete fusion of permanence and change. But we ought

not to speak of "fusion," for there was never separation; it is only, indeed, when we do separate those two abstractions, permanence and change, and, forgetting that they are only abstractions, endow them with concreteness, that our difficulties begin to arise.

As other important examples in this connexion, I might cite the two problems of Creation and Immortality. All the really big difficulties which seem to arise when we try to deal with these are concerned with time, and have their source in the (as I think) mistaken view that we are temporal beings. So soon as we discard this view the difficulties vanish, and it is clear that the problems in question do not really exist at all. In place of Creation (essentially a problem of time) we have the problem of the relations subsisting between certain non-temporal entities, namely, God and finite beings; while the question, "Do I exist for ever?" ceases to have any meaning in that the conjunction "I" and "for ever" implies the attribution of temporal qualities to a non-temporal being. The question of Immortality must not, of course, be confused with that of the survival of bodily death. The latter is on quite a different plane, for it is an empirical matter concerned only with the character of certain phases within an experience-whole and the relations between them.

We may now proceed to consider, from the point of view of the foregoing theory of time, the nature of the relation of time to unconsciousness. It is often held that the alleged occurrence in psychical beings of phases of unconsciousness raises certain perplexing difficulties in connection with time. For example, during deep sleep, or under the influence of an anæsthetic, can we be said to exist and, if so, in what sense? Or, on the contrary, do we pass into and out of existence?

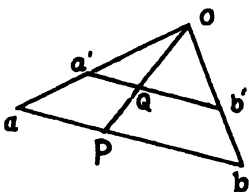
Now on the theory of time I have been advocating, these difficulties are seen to be largely illusory—that is, once it be

granted that time is strictly relative to the individual experient, the apparent contradictions inherent in a statement of the relation between time and unconsciousness vanish altogether. In the first place it is important to realize that, strictly speaking, if we confine our attention to a single experient, there is no such thing as "unconsciousness." The individual experience is strictly continuous; there are no "gaps" in it. If there were they would be either experienced or not experienced. Now we cannot say they are experienced without a contradiction in terms; while if, on the other hand, they are not experienced, there is no breach of continuity, as such, though there may of course be sudden change in the content of experience—but this may, and does, happen sometimes without the intervention of so-called "unconsciousness" at all.

How, then, does this idea of the existence of phases of unconsciousness arise? It is a consequence of the attempt to effect a correlation between part of the time-series of the individual concerned and the time-series of other individuals or the public time-series. This correlation sometimes appears to break-down. Thus a person is said to be unconscious when it is found that there are apparently no instants in his private time-series corresponding to the instants in a certain portion of the public time-series.

Now I think it can be shown without difficulty that there is really no break-down of the correlation between the various time-series in such cases. Let us approach the question by considering a matter of common occurrence in our experience of the duration of time-intervals. It very often happens that two time-intervals which are equal as measured by public time are, as actually lived or experienced by a given individual, of widely differing durations. An hour (of public time) occupied by waiting for a train will, in its actual passing, be experienced as an incomparably longer period than another hour spent by

the same person in some interesting pursuit. Two such intervals are of different duration if they are so experienced, for they are concrete realities whereas public time is but a conventional abstraction. Similarly, we may suppose that a time-interval $a b$ in one person's experience will frequently differ in duration from a time-interval $a^1 b^1$ in another person's experience although both correspond to the same interval $A B$ in the public time-series. In such a case, however, there is no break-down of the correlation between the two time-series. To every instant in the interval $a b$ there will still correspond one (and only one) instant in the interval $a^1 b^1$ although $a^1 b^1$ is not equal to $a b$. If we represent experienced duration by spatial length this point is made clear, in the accompanying figure, by geometrical symbolism. It is evident that to any instant P between a and b there corresponds one, and only one, instant Q between a^1 and b^1 , although $a b$ and $a^1 b^1$ are unequal. All that happens, geometrically speaking, when $a b$ is not equal to $a^1 b^1$, is a change in the position of O , the point from which $a^1 b^1$ is projected on $a b$. Now $a^1 b^1$ may shrink indefinitely, $a b$ remaining unchanged, but the correlation will still hold. This is true even when $a^1 b^1$ (and, consequently, O) approach indefinitely near to one another and finally coincide. The correlation continues to exist, though it is *for the time being* (from the point of view of $a b$) a many-one correlation. But this limiting case constitutes what we call a phase of unconsciousness in the individual whose time-series is represented by $a^1 b^1$. It is, however, only a limit and does not raise any special difficulties of its own. "Unconsciousness," then, is not really a peculiar kind of phase in the experience, or in the existence, of an individual, but appears on analysis to be merely a name for a limiting state of the correlation between one person's time-series and another



person's time-series when considered from the point of view of the latter.

I cannot leave this subject without drawing attention to what appears to be, if I am right, another curious consequence of this theory of time. How do we determine which instant in one time-series corresponds to or "is simultaneous with" a given instant in another series? I think we can only reply that the alleged correspondence is based on similarity between certain events in the two series. In virtue of this similarity, we allege that the events in question are simultaneous. Evidently, our procedure here is circular, and it is quite open to question whether there is, strictly speaking, any such thing as simultaneity at all. It depends on the point of view. Referring again to our geometrical analogy it is clear that, by selecting various positions for the point *O*, we can make a given period *a b* in one experience correspond to any period whatever in any other time-series. Now there is no reason why we should give preference to any particular position of *O* except, as stated previously, on the conventional grounds of similarity between events in different series, which, in itself, carries no guarantee of simultaneity in any absolute sense. Hence, I am inclined to think, for example, that my life is simultaneous with that of (say) Julius Cæsar in a way just as significant as that in which it is simultaneous with the life of Mr. Lloyd George, even though the bodily appearance of the one may occur in my experience, while the bodily appearance of the other does not.

However, this raises many arguable points, but I would urge that all these considerations re-inforce one another to show the artificiality of time as we conceive it. If we regard it as in any way absolute we are at once confronted with numberless difficulties. But such difficulties do not arise if we hold fast to the view that time is essentially relative to the individual experience-whole. To repeat what I have said before, it is the

expression of certain peculiar qualities and relations *within* each experience and not an external universal medium or condition limiting or comprising all experiences.

In the foregoing I have, for the most part, considered time on its own merits. Strictly, however, as the Theory of Relativity has shown us, we have no right to isolate time in this way, but must take a more comprehensive view by merging it with space into the continuum of space-time. Nevertheless, if I mistake not, all the conclusions of relativity-theory strongly support the arguments I have been attempting to set out.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C. 1, on January 18th, 1926, at 8 P.M.*

VI.—EXISTENCE AND CONVENTIONAL EXISTENCE.

By F. W. THOMAS.

THE last systematic discussion in English of the metaphysics of "existence" is contained in the late Dr. McTaggart's work entitled *The Nature of Existence*, of which the first volume appeared in 1921 and the second is still awaited. The present paper offers only some reflections, disjointed, it is to be feared, and inconclusive, of a logico-psychological character.

I.—SUBSISTENCE.

There is a sense in which every presentation exists, namely as a presentation; and similarly every presented content exists as such. But this sense, in which "existence" is equivalent to actuality or fact and is the opposite of non-occurrence, is of too general a character to invite consideration. The first and slightest degree of existence which seems to present a problem is that of being the object of a thought.

Since every thought, or at least every thought on the level of language and conception and above the level of sensation, is about something and cannot be about itself, some independent existence is implied in being thought of. Provision is sometimes made for this by discriminating in the thought on the one hand an activity and on the other hand a content. But such an activity would surely require to be demonstrated: what we experience looks more like occurrence simply, and in point of

fact we most commonly speak of thoughts as "occurring." Also, since no thought is without a content, the content seems analogous rather to a shape or quality than to anything of more independent status. The occurrence of thoughts of like content on separate occasions need not involve more than a conceptual or generic relation between them.

This difficulty is met by Meinong's doctrine of "objects" (*Gegenstandstheorie*), to which, when they are propositions, &c., he applies the further designation "objectives." He points out that there are many things concerning which statements can be made both as to occurrence and as to characteristics, but which nevertheless have no title to be considered existent. Prominent among such objects are things fictitious, negative, absurd and self-contradictory: among the objectives are propositions, when they are not in any degree affirmed. Since these can be considered in various aspects and true affirmation can be made concerning them, they have some kind of being and nature, "*sein*" and "*soscin*." Accordingly he ascribes to them a special status, to which he gives the name "*Bestand*," whereof the usual English equivalent is "subsistence."

We should normally feel, I think, that the "subsistence" so described is somehow mental. If I say "it is not true that Cæsar crossed the Rubicon in A.D. 10," this seems to mean that "the idea that Cæsar crossed the Rubicon in A.D. 10 is not a true idea." But by the "idea" we mean the content of a thought or the common content of a plurality of actual or possible thoughts: and, as we are not aware of any such thoughts having occurred or having been conceived as possible, we seek in vain for a subsistence of the idea outside the actual judgment.

In this perplexity we may have recourse to a common experience. It is not the fact that all presentations are accompanied by an I-consciousness. We constantly have experiences from which

all duality of subject and object, all "awareness," seems to be absent. (This is rather like the *nirvikalpakajñāna* of the Indians, concerning which see *Proceedings* xxii, pp. 28-9.) And it may be pointed out that this applies, in fact, to all thoughts. For, if I am aware of something, I am not usually aware of that awareness; and that this is not fallacious is proved by the fact that I can at another moment be aware of that awareness, and the series may be continued. Therefore, in awareness the subject "I" is part of the content, just as would be the subject "he." Again, the argument from experience may be supported by the consideration that a mental object, before it can be contemplated, should be constituted: this, I think, is Meinong's "*Produktion*." Into this production mind must enter as a factor, as constitutive; and it is not unreasonable to posit a distinctness and a priority in this operation. To avoid a doubtful term, we may call the product in this case not unconscious, but impersonal; but it may be that this "impersonality" is a matter of degree and merges into the absolutely unconscious. There are various other experiences which seem to require a purely constitutive and often unconscious operation of mind: such are, for instance, the understanding of speech and the working of arithmetical problems. It would be interesting to learn whether "awareness" varies with the size, power and complexity of objects, and whether the paralyzing of thought by such objects as God, the universe, a charging tiger and so forth is in part an exemplification thereof.

Such a mental precursor seems to provide a sufficient objectivity for "subsistent" objects; for mental precursors are known by their contents, as is exemplified in memory. When I remember something, I remember it in the aspect originally perceived: if the chair was on the table, I remember it so. But I do not necessarily, though I may, remember the perceiving: in the

former case either the original presentation was without awareness, or an awareness has been obliterated by the remembering process; in the latter case the awareness will have been, on the lines already laid down, part of the content. What we have suggested is, in fact, that the subsistence of unreal objects is actually memory, although in many cases it is memory of an immediately preceding instant—the quickness of thought will account for that. Where a recognizedly past thought is the basis, the subsistence is in fact referred thereto.

Upon this view the self-contradictory object, Meinong's "round square," does not seem to present any very special difficulty. For, though the "round square" cannot in any way exist, yet the group "round attributed to square" can, as a group, be brought together in a single act of thought.

A notable feature of these mental objects is their unlimited number. As Meinong observes* they are infinitely more numerous than real objects. And the reason is at hand: they are produced at will by the power of intellectual relations whereof the productivity is inexhaustible. Arithmetic is the most obvious example of this; but the intellectual functioning represented by the word "and" may be no less productive in other departments, and the functions of "of" and those of attribution and predication are likewise of unlimited scope. Where this productivity starts with some concept related to external existents, the products of "higher order" may sometimes be found to have corresponding existents, and so a real denotation and utility. For instance, the concept "Aristotelian" would be mentally producible even if there were no Society or other object to which it was applicable.

II. PHYSICAL EXISTENCE.

When we turn to the consideration of sense-presentations, a number of fresh qualifications come into view. In the first

place, the presentations require the functioning of the sense-organs, a fact which serves to exclude imaginations, dreams and so forth. Secondly, they are not producible at will. And thirdly, they all, even hearing, since we have two ears, involve spatial relations. All these factors, since they are not necessary for "subsistence," seem to militate rather in favour of an extra-mentality in the objects than against it. It is, therefore, surprising that, with the exception of the adherents of a particular philosophy, no one ascribes existence other than presentability to these objects. The statement might possibly be contested. But is there any ordinary human being—and these are the creators of language—who thinks that the stone, for instance, as presented to him in one view is the stone itself or a part thereof, and who does not believe that the stone itself exists? Normally, and perhaps essentially, science also seems to take the same view. Whether we consider shape or colour or feel or what not, we always find that common sense, when questioned, admits that the contents of single presentations are inexact and delusive appearances of existents.

But even internally the appearances seem recalcitrant to the idea of "existence," and this on the ground of change. Some single presentations, such as lightning-flashes, incorporate obvious changes, and the same is the case with all continuous appearances. Within every presentation, in fact, change is apprehended. If a whole which is never the same exists, then for it existence contains a temporal dimension, and at any single instant it does not exist. This, although in some ways highly acceptable, does not appeal to the ordinary feeling, so that science prefers to take the opposite direction and resolve all change into instantaneity and atomicity.

That the instantaneous should be said to exist seems, however, unacceptable; for the instantaneous is an ideal subject for the

verb "occur." This point, however, need not be pressed; for the strictly instantaneous and atomic is never presented and is theoretically not presentable. We might be content to say that it does "occur" and is non-mental.

Meanwhile we are still left with the idea of "existence" and also with a possible object for it, namely, structure. Even if we shrank from applying the term "existent" to an instantaneous ultimate atom, it would seem less appropriate to an universe of such. Structure, as found in a single presentation, might not, indeed, be a sufficient guarantee of existence; for structure is found in subsistents also. But what we actually find in the individual presentation is a structure consisting of spatio-temporal relations: and these same relations, through the overlapping of presentations, serve to link one presentation with another, and again with others, until finally we arrive at the notion of an universe comprising the content of all actual and inferentially possible presentations. The idea, then, of being in spatio-temporal relations seems to manifest an affinity to the idea of physical existence. If, however, the whole universe were presented in one view, and so all presentations were reduced to a single one, this structure would have no more implication than it has in each single presentation: it might be no more than a Kantian form of intuition. In the plurality of presentations, therefore, we must find a further condition of existence: and this again is reasonable; for, since presentations singly do not account for their own plurality, the reason for this must be external to them. If the reason were in the percipient, so that he, as it were, made a tour, or took partial views, of a four-dimensional universe, then we should have a duplication of time and a contradiction of the sense of it as an external condition. Accordingly plurality of (possible) presentations enters as a constituent into the idea of an existent.

It may, further, be pointed out that plurality of perceptions is an appropriate, as well as a natural and ordinary basis for the recognition of an existent. For, if we posit an existent, we posit something standing over against the percipient as a whole and therefore capable of affecting him in whole and part. There might, therefore, or may, be such a thing as a total apprehension of the presence of an external existent. And this might in some way be "gathered" in the consciousness. But at any rate in the case of creatures having a plurality of specialized organs simultaneously affected the association of such impressions seems inevitable. If I see the sun, I am also warmed. A mere recurrence of similar impressions upon the same sense would be, and, we may say, is, less provocative of an effort at construction; for in themselves the impressions are self-evident, and their repetition, so far as it is with a fair degree of similarity, is merely numerical.

No doubt, the idea of a physical existent involves other factors; but with these and the sensible qualities and an infusion of continuity in various measures we might build up something analogous to the things conceived by common sense. We may illustrate this with regard to the (approximate) sphericity of the earth. We all believe that the earth is round: but no one has ever perceived it, perhaps no one will ever perceive it, to be so. The thing is an intellectual construction, based upon astronomical and scientific reasonings and analogies, upon experiences of travel and so forth. It may be suspected that upon a basis of ordinary presentations we should make but a very poor sphere after all: very careful measuring of distances and angles terrestrial and celestial are required to constitute our globe. But the result of all these cogitations might still remain only a formula, were it not for the work of the imagination.

Imagination can put together separate perceptions and smooth

down their irregular junctures. It can see through surfaces of things into their interiors and to further sides and aspects. As has often been pointed out in our discussions, it enters into actual perceptions and gives us the illusion of seeing the non-presented shapes and interiors of visible objects. It thus affects the actual optical consciousness; and it is only exceptional individuals whose visible universe contains merely what is given by the sense. Thus imagination also contributes to our notions of physical existents.

We do not, however, think that the earth is round merely as a formula or an imagination. We think that it *is* round in effect and that, if we could see it, we should see it so, as we see the moon or the sun. And indirectly we do see it so, since the circular shadow is visible in eclipses. Our constructs, therefore, by a practical efficacy *inter se*, establish a further reality: and it is likely that the idea of practical efficacy, causality, is also included in the concept of every physical existent.

Hence after all the idea of a construct fails to cover the whole field of our experience of physical things; for it does not seem possible to bring causal efficacy into the picture. And we have also to account for the feeling, due to accumulating experience, of the infinitude of unexplored possibilities residing in the existent, and at the same time for the apparent simplicity and generality of the idea of existence. We may suggest, therefore, that the idea of an existent is due to the power of analogy working upon the proportion—

presentation : structure :: structure : x

and that its "existence" is an application of the root-idea of "fact." Externality is given by the connection with the actual presentations, a factor which Bradley also* makes an essential condition in the apprehension of the existent.

* *Logic*, ed. 2, pp. 69, *sqq.*

From the fact that all sense-presentations are spatio-temporally connected we infer that spatio-temporality is a law which pervades them all; and, since an objective law does not seem to be different from an essence, we may say that the universe has a spatio-temporal essence. And the idea of essence is in this case the more contiguous on account of the special property of mathematical objects in virtue of which their perceived or imagined manifestations seem akin to their rational concepts: the visible circle seeming really to embody its definition as a line always equidistant from a given point.

Spatio-temporality, while it seems both to connect and to disconnect the parts of a perceptum, cannot account for the interruptions involved in the plurality of percepta. Hence the essence is something different from spatio-temporality as presented; and, since it persists through the interruptions, it exists.

A dependent, but parallel, reasoning proves that the parts likewise correspond to essences and that these essences also exist. These parts are discriminated by experience of the sensible qualities and the actually discovered inter-connections.

How far this conclusion agrees with the views expressed in the extremely able volume of *Essays in Critical Realism* published by the seven American philosophers in 1920, I must not pause to consider. If their "essences" are regarded as identical with the structures which we have been considering, I should venture to disagree; for the structures are composed of phenomena, and the essences seem to me to exist behind the phenomena. Also, if the essences are held to be perceived, I should object that they imply a plurality of perceptions, realized essences a realized plurality and *prima facie* essences an imaginable or inferible plurality.

Professor Whitehead's doctrine of objects as "Aristotelian adjectives" of the events in which they occur seems to require a reduction to something more or less analogous. For an object,

e.g., a stone, while it can be an adjective of all the simultaneous scenes in which it occurs, cannot be an adjective of successive scenes. The latter would be possible for the ultimate atom, if not subject to change. But the stone is at each instant changed in every part, and is therefore not common to successive scenes. What is common must be an essence informing the particular at each stage: and to this the epithet "Aristotelian" seems even more clearly applicable.

I may close this part of the subject with the remark that sense-perception also may, on the lines expounded above, be essentially memory. But here we have a further argument, since perceptions take time and therefore must include memories of successive instants. This involves a criticism of the view which regards "further observation," reporting more and more details, as a means of clarifying and discriminating the perceptum. For "further observation" must obviously bring in more and more of the memory factor and, in the case of sight, more and more complicated effects of light which is indeed the only thing that really reaches the organ - variously reflected to and fro thousands of times from all other objects, including the eye itself.

It is interesting to observe how largely these modern discussions of sensibilia are anticipated in the debates between the Stoics and later Academics of Classical times. To the *καταληπτικὴ φαντασία* or "graspable (*sic*, self-evidently veracious) presentation" of the Stoics Carneades opposed his *φαντασία πιθανή* (persuasive) *καὶ ἀπερίσπαστος* (self-consistent in regard to features of the object itself and of its surroundings) *καὶ διεξωδευμένη* (when each of the features has been carefully scrutinized). The object and the content are clearly distinguished by the terms *φανταστὸν* and *φαντασία* or *φαντασιούμενον*; and the essences are in relation to the *προλήψεις*, which are

distinct from ordinary concepts (*ἐννοιαί*) in that they are *φυσικαί* and arise *φυσικῶς*. But they are *τῶν καθόλου*, whereas the essences of the moderns are perhaps particulars.

It is likely that many will object to the method of supposing essences at all, and will hold that we must rest content with the establishment of laws of connections of phenomena. In any case, it may be said, we cannot deal with individual essences. This may be true for science, or perhaps it may not be true, since science treats, for instance, of the sun and so forth. But it seems clear, as has been indicated above, that an objective law ---and this is what is intended---does not differ from an essence, except perhaps as a proposition differs from its meaning; and, if this gives proof of something ultra-phenomenal, philosophy must consider it. The absolutely individual cannot, of course, be discussed in language at all, language being mainly or wholly conceptual. But this does not preclude the possibility, or obviate the necessity, of considering organisms, one of which is, as Dr. McTaggart mentions, the universe.

The alternative that we can only know laws of connection of phenomena meets with the difficulty that for specious laws specious recurrence, and for true laws true recurrence, is required. But recurring phenomena are only similar, and similarity is of all degrees. Hence after all we require an "essence" of blue, hard, hot and so forth: and the same objection holds, if the sense-data are supposed to be existent: except that, upon that view, we know them fully in themselves and need not trouble about their occurrences.

III. CONVENTIONAL EXISTENCE.

We may, of course, have conventions with ourselves. When we have attached a sign to a particular idea, experience or action, the sign will serve as a means of referring individually

or generically to the same. Those who tie knots in handkerchiefs or mark pages in books or have private words, exemplify this sufficiently.

There can be no natural signs, except for those who believe in a purpose governing, or immanent in, the universe; if we have that belief, we can find a symbol in everything, a possibility of which, historically, liberal advantage has been taken. But, of course, any feature of nature may be *utilized* as a sign.

Ordinarily conventions imply other intelligences. And it may be observed that they imply in the others a more than phenomenal existence. The bodies of others (like our own) belong to the phenomenal world; if the ascription of intelligence to others were merely a formula framed to explain their behaviour, then they could not respond to signs, since the route from the sign to the signified thing or action is mental. We have shown, I hope, that the bodies of others, like all else which is manifested by phenomena, exist. But even those who believe in a plurality of intelligences having merely phenomenal universes must hold that these universes are representations of a system wherein the intelligences are arranged. For, if in our world we see a dog chasing in his world a hare which is fleeing in his, the point-to-point correspondences of the three universes are such as could not otherwise be explained. The analogy of the sense-organs in the three cases is also an argument. In the case of human beings language and social life enable us to verify the correspondences with apparently limitless precision.

We therefore credit other beings with thoughts of some order, more or less in the proportion of their organs and actions. And in the case of our own species we know that the thoughts are highly determinative of the actions. It makes, for instance, a very serious difference to the actual performances of a human being, and ultimately to his body, whether his belief and emotion

are attached to the idea Jehovah, or Allah, or Viṣṇu, to duty or beauty or honour or amusement or wealth.

Thoughts, like other things, can be perceived only by their adjectives, that is, their contents. This seems to be true even of our own thoughts: in the case of others the process is further, unless we accept thought-transference, inferential or analogical. But, given the inference, the thoughts and their adjectives have an existence over and above that of our own. For they are objectively operant in a world which has already the addition of physical existence. This existence may provisionally, since it is usually embodied in a conventional sign, be called "conventional" existence. When we refer to anything existing as content of another's thought, we refer to the conventionally existent. Such things have also, of course, subsistence.

There are many things which have this form of existence and no more. But a distinction must be drawn. There are some contents which include the idea of existence, which is then hypothetical. Thus in referring to Hamlet we are aware that he actually exists only in other people's conception; but we are also aware that in that conception he has a suppositious existence. In other cases this supposition is absent; for example, in the case of mental and moral qualities. We may enumerate some classes of things falling under these two several heads.

Contents having conventional existence including suppositious real existence comprise—(1) all original fictions having a social value, such as the creations of poetry, literature, fable, law: *e.g.*, Othello, Don Quixote, Cinderella, Punch, John Doe and so forth; (2) all fictional survivals of things originally or elsewhere regarded as real: *e.g.*, Zeus, Fate, fairies, goblins, chimæras and so forth, on some views also such ideas as energy, force, matter and so forth. To the alternative class, that of contents not including suppositious real existence, belong all things wherein mental

relations are a factor and thus—(1) all meanings as such ; for instance, the meaning “Aristotelian,” which subsists independently of any denotation ; (2) all propositions and hence all beliefs, sciences, systems, plans, schemes, &c.

It will be observed that whether any particular idea has conventional existence and within what range is a matter of fact. How it came to have such existence and what are its relations in its field is matter for history and the sciences. What I hope to have made clear is that the philosophic status of such existence is different from, and additional to, that of subsistence in the subject himself. We need not enlarge upon the practical importance of existence in other people’s minds, since it is brought home to us by such phenomena as proselytism and propaganda, fashion and crowd-psychology.

There is, however, a further philosophical reason for a discussion of this subject. Conventional existence is often associated with physical existence, and that in a manner which involves a danger of misapprehension. The objects usually adduced in this Society as illustrations, the table, the chair, the inkstand, have not, as such, a physical existence. They are all *arte-facta*, and their essence is teleological. They are mostly of such varying sizes, shapes, colours, &c., that, if they were natural, they would certainly be classified under multiple genera or families. When transferred to other milieus or other uses, they undergo a complete transformation of nature. As table, the table exists only in relation to certain, not inevitable, uses : nevertheless it takes part in performances which in its material quality alone it would never have experienced, and it also has parts which depend upon uses. This applies evidently to all objects of value, whether for utility, as in the case of coins, for understanding, as books and symbols, for pleasure, as toys, &c., or for any other purpose. It is, of course, not the case that all values are actually conventional,

since every one has his individual preferences. But the preponderance of conventional utilities is so great—including, for example, all such objects which have names—for in thinking of names we think of their general use—that value may be regarded as in general conventional.

Among things of this nature we must not forget to include persons, functions and groups. Law and society present us with an infinity of personalities and groups which are purely conventional in so far as they embody values or purposes. A prime minister, a judge, a priest, a society, a meeting, a government, an institution, are all materially embodied things; but the material embodiment is generally the least part of their denotation. The same is, moreover, the case with personalities. By Mr. Gladstone we do not mean merely the material continuant or human individual primarily denoted: we mean that human individual as concerned with and determined by certain historical occurrences, certain actions, and a certain public character and estimation. And the same applies to every individual in every social group.

It is hardly worth while to illustrate at large the conventional values of operations. Let us merely mention the social, ethical, legal and religious qualities of such acts as salutations, conduct, administrations, devotions. The dictionary is crammed with names of such procedures, whereof the conventional value is the very essence. But it is worth while to advert to the great complexity of constitution which characterizes some objects unquestionably existent. There is, we shall all admit, an actual organic something designated by the term Bolshevism; but how many volumes would be required, or have been written, to further our understanding of the physical objects and relations, the intellectual and moral systems and conceptions, which are factors in its nature? The world of physical phenomena itself contains objects

of much more variety and complexity, — scenes, occurrences, occurrences of occurrences, motions of motions, *σύνολα*—than are usually contemplated in logical writings; but they do not equal the complexity of objects to which is added the complication of conventional existence.

It may, however, be urged that, whatever the teleological character and generic classification of such objects as chairs, in respect of their individual physical existence they are quite on a level with stones, which in their forms differ, in fact, far more widely. As regards the stones we need not refuse to admit that the generic name has a rather haphazard application. At the same time it may be that mankind, which has a rather extensive and prolonged acquaintance with such objects and the laws connecting their several phenomenal manifestations, has hit upon a real part and a real essence in nature. In the case of chairs we admit a conventional essence. But that that association of qualities which we call a stone differs widely from that which we call a chair is unmistakable. For chairs occur only in the vicinity of human beings and in certain completely understood ways, while stones are exempt from both these limitations. If a chair or a worked flint were found under 20 feet of undisturbed sand, the inferences would be not at all the same as if it were an unworked flint.

It is also clear that the structure, cohesion, &c., of a natural object differs from that of an artificial one. Also, between our conceptions of the structure in the two cases there is a difference which we may compare to that between the *έννοιαι φυσικαί* and the *έννοιαι simpliciter* of the Stoics. They both correspond to something actual, but the *έννοιαι* are logically clear to us, while the former contain a wholly indefinite amount of practical experience. Nevertheless, the logical seem to help us to understand the physical.

Now a line demarking natural from artificial objects is difficult to draw. Not to speak of the towns, where natural objects must be extremely rare, we find the country filled with such *arte-facta* as roads, fields, estates, parishes, shires, countries, managed rivers, and so forth. Even the vegetation is mainly managed, and the species of produce, such as wheat and so forth, definitely human products. The features which are too great for actual manipulation have utilities, which enter into our conceptions of them and affect the range of their denotations. The sea supports traffic and so forth; water is purifying; the air is the air we breathe; the stars are at any rate a marvel; and the sun gives light and warmth, besides rendering many other services. Perhaps nowhere is an utilitarian under-feeling more apparent than in the ancient selection of the four elements—earth, water, air and fire. There is, moreover, the familiar experience of noticing and overlooking, which makes us live in a world rather of things which we expect to see and are in the habit of seeing than in one which unbiassed observation would reveal.

How far can we proceed in this direction? For it is again obvious that the functioning of our organs is in a large measure directed by purposes, and it is believed that originally similar organs have been developed or “selected” into distinct uses and forms. Nor are these uses and forms free from a large conventional element: in the case of all creatures having in any degree a social life (reproduction, maternal instinct, &c.) the uses and the consequent forms have reference to others, so that we may say that our arms and eyes are designed not for ourselves alone. Hence we neither perceive nor act strictly as individuals, but with the impressions of our contemporaries and of past generations.

That in regard to our conceptual life the same is the case is still more obvious.

Artificiality applies to actual material elements of things, since very many materials and their qualities have been constructed by industry and science, while very many more have been extracted. Though this does not qualify the existence of these and of the natural objects, which is guaranteed by their efficacy *inter se*, it suggests that the cognitive activity may also have worked selectively, choosing those combinations of qualities which possessed utility : in this connection the limited range of our perception of light has often been cited. But, when we arrive at the simplest sense-data, such as the perception of a colour, the existential value of the experience, so far from being at the maximum, is, in the view of science, minimal.

We are all, of course, aware that M. Bergson has followed this path (except as regards the conventional factor) to the end, and holds that our whole universe is constructed, or selected, under the dictation of practical activity. A sceptical conclusion is, however, vitiated not only by the causal correspondence avouched by ordinary and scientific observation, but also by the point-to-point correspondence of the universes of different species of living creatures. This last consideration seems to demand a complementary relation between the specific organs (with their functions) and the apparent universes, so that jointly they result in action consonant with a single existent whole.

The complexity is, however, very great, since that which through the eyes of a single individual contemplates the universe is an experience largely non-individual in respect of contemporaries, and non-individual in respect of evolution ; so that the present world seems in part to be contemplated by its own past. This is to a certain extent the idea of the Indian *samvṛti-satya*, or *vyāvahārika-satya*, "conventional truth," "practical truth," which partly suggested the choice of the designation in this paper.

The points which I wish to make in regard to conventional existence and *arte-facta* are the following :—

(1) On the one hand, it is important, when we are referring to physical objects by class-names, to make sure that the class is really defined only by strictly physical features.

(2) On the other hand, *arte-facta* do really seem to shed light upon the nature of physical objects. They have a structure ; they contain an essence ; and they embody an ultra-individual experience, to which they are relative.

(3) Perception, besides incorporating imagination and conception, may perhaps carry with it also the germs of analogy and teleology.

As regards relative existence, we may remark that existence relative to “another” seems to be real ; for the utility of a nest to a bird, and of a hat to a man, determines their creation and their whole employment.

IV. RECAPITULATION.

The distinctions of which we have taken note are between the following :—

(1) Facts—the distinction between something and nothing.

(2) Thoughts—whether these can be said to exist, I do not know. Existence seems to come with the development of the duality of subject and object within thought. How thoughts are known is also mysterious : can they be said to be perceived ? or “lived through” ? In experience we seem to be aware of them by knowledge (inference ?)—through the fundamental faculty of memory—of their adjective or content ; as one Indian view also maintains. The alternative view supposes a self-consciousness which “like light, manifests both itself and other things” : and it seems open to the danger of an infinite progress, since, if in one act I know and know that I know, further knowings should result without end.

(3) Thought-adjectives, or thought-contents, or thought-objects, "existents" of some class or other, such as :

- (a) subsistents—thought-contents simply ;
- (b) sensible phenomena --a species of (a) ;
- (c) physical existents conceived upon the basis of (b) ;
- (d) physical existents having thoughts—"others" ;
- (e) contents of the thoughts of (d)—conventional existence ;
- (f) relative existence under (b) and (c).

I am not prepared to say anything philosophically concerning relations between these different sorts or degrees of existence or reality. There may be several or many more. But, if there are such sorts or degrees, it seems worth while to scrutinize them. I have merely followed the method to a certain point, and I anticipate some damaging criticisms at each stage.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C.1, on February 1st, 1926, at 8 p.m.*

VII.—ANCIENT PHILOSOPHY AND MODERN SCIENCE.

By G. C. FIELD.

IN what follows I have attempted to summarize what appear to me to be some of the most important results of recent work in the philosophy and history of science, and to show their bearing on certain problems which arise and certain views which are commonly held. I cannot pretend to claim any originality for what I have to say; indeed, it is only my own in the sense that I have been convinced by the arguments of those other thinkers, largely, I may say, because they confirmed, with their much wider foundation of knowledge and their more systematic demonstration, certain suggestions which had long been working in my own mind.

The problems on which these investigations throw such light are those which concern the general nature of scientific thought, and in particular its relation to philosophy. Or, if we look at the matter from the historical point of view, there are questions to be answered such as: What is the new feature which appears when modern science begins? Or again: What, if anything, is the bearing of the philosophic speculations of ancient Greece on the development of modern science? There are many people who still maintain the view that science consists essentially in the patient observation of facts, including, of course, the specially valuable observation of facts under controlled conditions which we call experiment. And modern science begins, we are told, when people begin to look at the facts for themselves instead of accepting them on authority or trying to reason out what they ought to be without going to look what they really are. Thus, for instance, we are told, Galileo showed the essential

originality of his point of view by refusing to accept the statement made on the authority of Aristotle that a heavier body would fall to the ground quicker than a light one, and by trying what really happened for himself. Only the other day, again, I saw in an important literary journal a review of a book on Psychology, in which the reviewer said that the reason why Psychology had made so little progress in comparison with the physical sciences was that it had for so long maintained its hampering connection with metaphysics and had not confined itself to patient examination of the facts without philosophical preconceptions. The same point of view appears in the essays on the development of Greek medicine by the editor of the Loeb *Hippocrates*. Throughout in his treatment of the subject philosophy appears as the enemy of scientific study of the facts, as the great hindrance in the way of the development of science. And this view is hardly to be wondered at considering that his notion of a philosophic hypothesis is that it is "a generalization framed with a view to unification rather than to accounting for all the facts; it is a foundation for an unsubstantial superstructure; no efforts are made to test it by appeals to experience, but its main support is a credulous faith."

The general point of view of the nature of science which is thus expressed has long been an object of suspicion to philosophers. They have, however, lacked in general the detailed knowledge of the methods and results of the natural sciences which would be required to justify this suspicion. But all the recent work by philosophers who were also qualified by their knowledge of science has gone to show that this suspicion was fully justified. To mention only a few names in this connection, I would single out first and foremost the work of M. Emile Meyerson in France. In England the same result emerges from the writings of a distinguished member of this Society, Professor Leonard Russell; and Professor A. A. Burt's recent work on

The Metaphysical Foundations of Modern Science demonstrates the same theory by a more strictly historical treatment.

From this and other similar work certain general conclusions appear to emerge clearly. Summarizing them roughly, one may say that, of course, careful observation of the facts is essential at all stages of scientific investigation, and that science would not advance at all by any other method. But, on the other hand, it appears equally clearly that really scientific investigation could never have got started by simple observation of the facts alone, even when aided by experimental methods. Scientific thought starts and is sustained throughout by the adoption of certain ideals of explanation, certain "demands," as Professor Russell calls them. Scientific thought requires, in order to set it going, the acceptance of some theory of what explanation means, of what we are to set out to look for, and of what the lines are on which we are to demand that the answers to our questions should be given. These demands or ideals of explanation are not in the first place suggested by mere observation of the facts to be explained, though they may be verified or possibly modified in the later stages by such observation. But it does not suggest them in the first place, and, indeed, it appears that too close and rigid an adherence to the observed facts would rather have hindered the adoption of those ideals of explanation from which science starts. In other words, the adoption of a certain philosophic view was a necessary preliminary to the start of modern science. And the supposed hindrance that philosophy imposed in the way of this start turns out on investigation to have been only the hindrance imposed by the adoption of one particular philosophic view. This hindrance was removed not by the abandonment of philosophy altogether—none of the earlier scientists were ever ashamed of calling themselves philosophers—but by the definite and explicit adoption of another philosophic view as the starting-point of scientific investigation.

To demonstrate this in detail would be a long task. But a few instances may serve to illustrate, if not to prove, my point. Let us consider first the case of the Copernican system. No doubt to the modern astronomer the system as formulated by Copernicus would appear only one stage less antiquated than the system of Ptolemy. But I think that it would be universally recognized that the acceptance of the Copernican system made one of the turning-points in the development of science, and, indeed, might be regarded from some points of view as the starting-point of modern science. Yet how did this revolution come about? Certainly not simply by patient observation of the facts. Such observation by itself could hardly lead anyone to deny such an obvious fact, which anyone could observe for themselves, as that the sun went round the earth. We may recall the retort of the Earl of Warwick in *St. Joan* when he hears of the ancient sage who believed that the earth went round the sun, "What a fool! Couldn't he use his eyes?"

The fact was, of course, that the Copernican hypothesis was adopted because it enabled the movements of the heavenly bodies to be expressed in the simplest possible mathematical formula. But there was nothing in the facts themselves and the mere observation of them which would suggest that the simplest explanation was necessarily to be adopted as the true one. It was the demand, the ideal of explanation which was the motive power behind the acceptance of this hypothesis, and the facts were made to conform to that. We know, indeed, that for some time it looked as if they would refuse to conform: in the imperfect state of observations at the time the facts appeared to disagree with Copernicus's calculations. There is a well-known passage in Galileo's *Two Great Systems*, in which he expresses his admiration for the faith in reason which made Copernicus hold fast to his view, in spite of its apparent

discrepancies with the facts, until more accurate observations at last confirmed it. It is, he says, the great claim to renown of Copernicus "that he did constantly continue to affirm (being persuaded thereto by reason) that which sensible experiments seemed to contradict."

Another instance of this "rape of reason upon the senses"—to use Galileo's phrase—is to be found in the development of the atomic theory. We are still often told by the historians of science that the atomic theory of its first founders among the Greeks was a mere guess devoid of scientific value, and that atomism as a serious scientific theory owes its origin to John Dalton. But it is no disparagement of Dalton's great achievements to point out that he took over the notion that matter was composed of atoms as an already universally accepted belief,* and that there is no particular reason to suppose that he could have arrived at it independently if it had not already been familiar to him. The theory came to be more and more firmly accepted because every advance in scientific knowledge seemed to confirm it, and Dalton's work represented one of the greatest steps in advance in the process of rendering it capable of application and verification. But this should not make us blind to the great achievement involved in first conceiving of it. It is so familiar to us nowadays as a theory that we are apt to find it difficult to realise what a tremendous effort of mind must have been required to conceive of such an idea as this. It is obvious, if we reflect for a moment, that observation of the facts could never have suggested it in the first place. It must have seemed, rather, to contradict absolutely the obvious facts that we could see around us. On the other hand, to speak of it as a mere guess of no scientific value would

* He refers to it at the beginning of his book as "the conclusion which seems universally adopted." It was, of course, perfectly familiar to Galileo, Boyle and Newton.

be the height of superficiality. Theories at once so revolutionary and so pregnant with future possibilities are not arrived at by mere guesswork. And, in fact, this theory was arrived at because it seemed the best adapted of any theory to fulfil the demands which several generations of philosophical reflection had formulated.

What, then, were the demands or the ideals of explanation, the formulation of which gave rise to the development of modern science? It appears to me that, in regard to this, there was something which appeared or re-appeared in the period that saw the rise of modern science—a period which we may place roughly within the limits of a century and a half from the time of Copernicus—and which was not to be found in the centuries that preceded it. But it appears equally clear that the novelty does not consist in the demand for the use of the methods of observation and experiment. No doubt there was an increased interest in the application and results of this method, and an increased interest in the kind of facts to which they could be applied. But a more careful investigation of the facts—such as is given, for instance, by M. Duhem in his *Études sur Leonard de Vinci*—will show that there was no lack of observation, and, indeed, of experiment in the centuries which preceded this period. The fact is that we have been often inclined to take too seriously the sarcasms of Galileo at the expense of his opponents, and to accept the amusing and possibly exaggerated stories that he tells of their stupidity as typical of a whole period. But in reality readiness to accept things on the authority of others, and unwillingness to open our minds to unaccustomed ideas, are not the monopoly of any one period. These phenomena occur in modern times, just as the opposite qualities of mind are to be found in the Middle Ages. If we are looking for an element of novelty in thought we must look in a different direction from this.

If we are to single out one feature which is most characteristic of the work of these founders of modern science, we should probably choose the constant repetition of the demand that rational explanation should be given in precise numerical or mathematical terms. It needs no demonstration that explanation in such terms is the ideal of modern science. "Science is measurement," as one modern scientist has said; and the explicit statement of this point of view appears to be the clearest novelty which distinguishes the work of sixteenth and seventeenth-century scientists from that of their immediate predecessors. No mediæval scientist or philosopher, so far as I can discover, ever arrived at such a conclusion. Even Roger Bacon, who speaks of the value of a mathematical expression of scientific facts, does not seem to adopt this as a single guiding principle.

We get the fullest statement of it as a developed philosophic doctrine in the works of Descartes, whom M. Meyerson calls the legislator of modern science. But well before his time we find it explicitly adopted by other writers. Galileo states it as his view more than once. And he makes it clear that his adoption of this view was one of the chief points of difference between him and his opponents. The champion of the peripatetic philosophy in the *Dialogue on the Two Great Systems* is represented as quoting against the new views the reproach of Aristotle against Plato, that he reduced philosophy to mathematics. And the counter-charge of undue neglect of mathematics is brought against the Aristotelians by the mouthpiece of Galileo's own views. But the most complete statement of this point of view before Descartes is to be found in the works of Kepler. Numbers or the objects of mathematics generally are, in his view, the archetypes of the created world: in that sense he speaks of them as *causæ naturalium*. And, as the human mind is created to enable man to understand nature, number or quantity is its proper object. It seems, he says, by the law of creation, unable

to know anything fully except quantities or whatever can be known by means of quantities. He, too, is quite clear that this is one of his main grounds of difference from the dominant Aristotelian philosophy. It is true that in a later mathematical work he suggests that Aristotle himself was really hinting at the view that the category of quantity was in a superior position to all the other categories.* But in other passages he describes the general point of view as the opinion "*quod Aristoteles tot locis vellicavit.*" And he goes on to connect this difference of opinion with Aristotle's lack of true religious knowledge and his disbelief in a creation of the world.

Now Prof. Burt is surely completely right in arguing that this point of view could not be suggested by mere observation of the physical facts themselves. Such observation could not at this period have suggested that every phenomenon was capable of precise numerical measurement and expression in mathematical terms. The assumption was verified over an ever-widening field by successive generations of investigation. But we cannot say that even yet it has been completely verified. Still less could observation of the facts by itself tell us that the quantitative and measurable aspect of phenomena was any more important or fundamental or real than the other aspects, which were equally facts given by observation. It was an ideal of explanation, a demand of the reason which led investigators to concentrate on this point, whatever observation by the senses might suggest. That is why we find Galileo, and still more often Kepler, proclaiming the importance of the reason and its right to sit in judgment on and revise the deliverances of the senses. It is true that we can also find passages in both which emphasize the importance of using and trusting in our senses. But the apparent

* There appears to be a slight error on this point in Professor Burt's admirable account of Kepler's views.

contradiction is easily resolvable if we see the difference in the occasions on which the two points of view were urged. . A belief in the importance of reason and reasoning is not incompatible with a full realization of the fact that there are some points on which reasoning without observation by the senses could not give us information. It would need reason to tell us that the quantitative and measurable aspect of nature was the only aspect which was fully intelligible to us. But to know what the exact measurable quantity was of any particular thing we should need to measure it and see the result. From this point of view, we might describe the essential service of these scientific philosophers as the delimitation of the proper fields of the two.

Is this demand for a mathematical explanation the fundamental fact about scientific thought? I do not think so. For its fulfilment depends in its turn on the fulfilment of another demand, which goes much deeper and covers also a wider field. It is clearly only possible to reduce a series of phenomena to mathematical terms when you have discovered at least so much identity in them that they can be expressed by the same formulæ and measured by the same standards. In other words, to arrive at a scientific explanation you must begin by reducing qualitative heterogeneity to qualitative homogeneity, with only quantitative differences. But, as the development of scientific theory shows, even differences of quantity are not ultimately satisfying to the demands of the reason, and search is made for some underlying reality, which is not only the same in kind everywhere but which does not either increase or diminish in amount. As M. Meyerson points out, the characteristic result of a scientific investigation is expressed in the form of an equation. It is, in the main, the work of this author which has shown in recent times how the development of science rests on the acceptance of what appears to be a deep-rooted conviction of the human reason, that a rational explanation of phenomena has been reached in so far

as apparent differences are discovered to be reducible to a real identity. He calls attention, for instance, to the way in which our demand for a rational explanation seems to be satisfied when we discover that an apparently new fact was really there all the time, when, that is to say, we reduce the apparent difference between what was there at one moment and what was there at another to a real identity. But it is unnecessary to repeat the impressive argument in which he develops and, in my opinion, establishes his position.

The general result, then, seems to emerge that science has progressed so far along its present lines because it was originally set on these lines by speculation of a kind which can only be called philosophical. The modern scientist can afford, throughout the greater part of his work at any rate, to neglect speculations of this kind only because the work has already been done for him by previous generations. It was they who laid down the ideal of explanation, and who made it clear what the scientist must aim at finding, if he is to be able to say that he understands and has explained the facts. He can never confine himself to mere passive acceptance of observable facts: he has to try to reduce them to something else until they have fulfilled his ideal of explanation. I remember hearing a scientific colleague of my own say, with only slight exaggeration, "Patient observation of the facts, indeed! We should never get anywhere by that. We have to tell the facts what they've got to be, and then go on working at them until we find they really are like that."

By whom, then, were these philosophical presuppositions of science worked out in the first place? Full credit must be given to Galileo, Kepler, Descartes, and other contemporaries of theirs. But, be it noted, they themselves were only too ready to recognize that they were building on foundations already laid by earlier thinkers still, and we constantly find the first two, at any rate, speaking of their own philosophy by the name of the

ancient school of philosophers from which they derived it. They appear anxious to proclaim the fact that their fundamental views in these matters were suggested to them by Plato or by what they know of the Pythagoreans. It is clear that the idea of mathematical statement as the ideal of explanation came to them in the first place from those sources. It is the same with most of the other fundamental ideas which influenced the development of science at this period. We know that Copernicus was first set on the track of his system by learning that Aristarchus and other Greek thinkers had suggested that the sun should be taken as the central point rather than the earth. And the atomic theory was avowedly taken over from its first founders, either directly or through the medium of Epicurus and Lucretius. Whether any of the scientists or philosophers of this period could have thought out these theories by themselves, we simply cannot say. But what is obvious is that they did not in fact do so, and made no claim to have done so.

The realisation of these facts ought to save us from any danger of underestimating the contribution of the Greek philosophers to the development of modern science. And yet, it must be admitted, that the case for them is still too often misstated. Thus, when they are criticized for their inadequate appreciation of the importance of observation and experiment, we are accustomed to hear it urged in reply that they probably used experiment more than appears at first sight from what we know of their work. And this is quite true. Certainly they were keen observers, and, even in the fragments that we have, we find the appeal to various thoroughly sound bits of observation in support of their views. Yet, even so, it remains true that the centre of their interest, as far as we can judge, was not in what could be discovered by means of these methods. But is this necessarily to be counted against them? Not if we recognise the importance of establishing an accepted notion of what scientific explanation

means, and realize the contributions they made by exploring the possibilities in this direction.

These considerations enable us also to give an answer to the question, What was the new element which came into thought when Greek philosophy began with Thales and the Milesian school? Different historians of philosophy have given different answers to this question. But from our point of view the answer is not difficult. What was new, what distinguished them, for instance, from the Babylonian astronomers, was that they did not remain content with simple observation of the facts, but that they demanded an explanation, and that they saw that this explanation must be given in particular terms, which were not suggested by the facts as they were observed. They first arrived at the idea, which as we have seen is implicitly or explicitly at the basis of scientific thought, that the phenomena of nature are to be explained by reducing their apparent differences to an underlying identity. The actual descriptions they gave of what the underlying identity was need not concern us now. They have, of course, no longer any value, though they were undoubtedly based upon real observations and real arguments, which made them, in the state of knowledge of the time, not wholly unreasonable. At any rate, they were very far from being the mere guesses which they are still sometimes called. But the real service of these thinkers, their great step in advance, lay in their ability so far to criticise the deliverances of their senses that they refused to accept the obvious facts at their face value, but demanded that some identical element should be found to which they could be reduced. This was indeed a "rape of reason upon the senses" which must have needed an extraordinary mental effort on the part of these thinkers. Without it, the development of any science would have been impossible.

It would be out of place here to go through the history of Greek philosophy and science from this point of view. One or

two special points may be emphasized. It needs no demonstration that the work of Thales and the Milesians was of this nature. But what does perhaps need pointing out is that the work of Pythagoras and the philosophy of numbers is also a special development of this point of view. It is not, as it is sometimes represented, an alternative line of speculation, but an offshoot from the same main branch. The doctrine that things are numbers is but a slightly exaggerated form of the modern scientific theory that the essential fact about the series of phenomena is that in it which can be measured and expressed in mathematical terms. And this, as we have seen, depends for its possibility upon there being so much identity in the different phenomena that they can be expressed by the same kind of formulæ. Indeed, it is a natural step from the belief that all the apparently different things are really made of the same underlying reality to the view that their differences must therefore be due to differences in quantity of the same stuff, that these differences in quantity should, then, be measurable, and that the result of this measurement and its numerical expression is the essential fact about all these things.

We do not know how far Thales and his successors made explicit and defended the underlying assumption of their theories. The first explicit and unmistakable assertion of this underlying assumption as a guiding principle that we find is in the writings of Parmenides. There are two main points that can be singled out as of special importance for our present discussion on what we know of the system of Parmenides. One is his explicit adoption of the principle that what we are to adopt as true must satisfy the demands of the reason. The test of truth and reality is not what appears to the senses, but what can be completely thought out. "It is the same thing that can be thought and that can be." It was this aspect of his thought, no doubt, which is responsible for the profound admiration that he awakened

in the mind of Plato, who in other connections was one of his acutest critics. The παντελῶς ὄν, παντελῶς γινώσκον of Plato is really a re-statement of the guiding principle of Parmenides' doctrine. And the whole side of scientific thought which insists on the demand for a rational explanation and refuses to accept the deliverance of the senses as mere brute fact goes back to this.

The other point in Parmenides' philosophy is, perhaps, more obvious and familiar, and that is his insistence that what is really intelligible is identity. For the demonstration of the importance of this idea in modern science I must refer once more to M. Meyerson. He quotes Leibniz as the first thinker who clearly stated this principle. But this seems to do injustice to the prior claim of Parmenides. Subsequent Greek thought on these matters, as Professor Burnet has shown, all took as its starting-point the work of Parmenides and his followers. In particular we may note Professor Burnet's demonstration of the close relation of the atomic theory of Leucippus and Democritus to the doctrine of the Eleatics. Something has already been said of the intellectual achievement involved in the conception of such a theory at a time when it could not possibly be an object of proof by sensible observation or experiment. And it must be taken as established that the work of the Greek atomists is directly responsible for the genesis of modern atomic theories, widely though these have diverged from their original. It is not unfair to say that without Parmenides there would have been no Democritus, and without Democritus no Dalton. This is only one illustration of the profound influence of Parmenides on the development of modern science.*

* I do not think that it is fanciful to find another trace of the close coincidence between the line of thought of the Eleatics—in this case represented by their successors, the Megarians—and that of modern scientific thought, in the denial by the former of potentiality in Aristotle's sense (see Aristotle, *Metaphysics* 1046, b. 29). It is certainly characteristic of

All that has been said hitherto is no more than an outline of the results which the historical and philosophical investigations of many thinkers seem to me to have established. I would sum them up thus. It appears to be an historical fact that modern science got started on the only path along which progress was really possible by the definite adoption of certain theories about the meaning and nature of scientific explanation in general—theories which could not have been derived in the first place from observation of the facts that had to be explained, though the progress of observation and experiment has more and more verified their applicability. These theories were in part developed by the thinkers of the sixteenth and seventeenth centuries; but the greater share of the credit for them must be given to the philosophers of ancient Greece. It was only after these philosophical theories had been fully worked out that the work of applying them in detail to the facts by the methods of observation and experiment could be fruitfully undertaken. And we may conjecture that there were certain advantages for the progress of science in the fact that so many generations devoted their main energies to the working out of the philosophical preliminaries before the work of scientific investigation, in the narrower sense, began.

As I approach the end of this paper the problems raised seem to become of more fundamental interest. I have so far confined myself to showing the effect on practice of the adoption of a

scientific thought to refuse to accept the statement of a potentiality or tendency as an explanation of anything, and to demand that the explanation shall be given in terms of something which actually happens. The passage from popular to scientific explanation clearly shows this feature. And it can also be detected within the progress of the latter, as, for instance, in the point of view which would reduce so-called potential energy to the kinetic energy of some concealed part of the system. As Sir J. J. Thomson said many years ago, in referring to this view: "Potential energy cannot be said, in the exact sense of the term, to explain anything."

particular philosophical standpoint in the development of scientific thought ; but I have not raised any of the more difficult questions which these results suggest. I can only mention them here, though in one sense the main object of my paper is to lead up to them.

If it is true, as I have maintained, that these demands or ideals of explanation do not in the first place come from observation of the facts to be explained, where do they come from ? I have spoken of them in places as the demands of the reason ; but that is only to give them a name. The comparatively simple explanation in terms of the current theology that appealed to Galileo or Kepler would hardly satisfy us now. Nor is it a satisfactory answer to say that they are known *a priori*, except in so far as this, too, amounts to no more than giving them a name. At any rate, they have little resemblance to what Kant, for instance, meant by *a priori* knowledge. They are in no sense necessities of thought, nor can they be said to be involved in all experience. On the contrary, they await verification by experience. Professor Russell, in a recent paper to this Society, has even suggested that they are modified by subsequent experience. And, on the face of it, this is clearly true, though I would suggest the possibility that these modifications are largely, at any rate, in the form of expression, and that there has always been an underlying identity in all the different forms in which they appear. Would it be a satisfactory account to say that they were the expression of the Absolute in human reason, and that they are verified in observation because it is the same Absolute that expresses itself in the facts of physical nature ? Or will they turn out, after all, to be the results of observation, but observation of a different set of facts, namely, the pervasive characteristics, which Professor Alexander would call "categorical," that are present in all reality ? I leave these questions to subsequent investigation.

Closely bound up with these questions would be a further set of questions about the truth or validity of these demands or ideals of explanation. That they are verified to a surprising extent in the subsequent progress of scientific investigation is obvious. But it is equally clear that to arrive at the verification in many cases science has simply to leave out of account certain groups of facts to which these demands do not seem to apply. The question becomes urgent when we ask how far these ideals of explanation, which have been so successful in physical science, can be or should be applied to other branches of knowledge. It is clear that they were worked out in the first place in relation to the material world, and that their verification has been most complete in the sphere of Mechanics and Physics. It is permissible, therefore, to raise doubts about the extent to which they can or should be applied, for instance, to the investigation of vital phenomena. That they have been applied in this field, and with some success, cannot be denied. Professor Haldane has stated that periods of mechanism in Biology have always been periods of progress, while periods of vitalism have been periods of stagnation. I suggest that one reason, at any rate, for this is that in investigating biological facts on a mechanistic assumption scientists have been following an ideal of explanation which has been relatively clearly conceived and formulated, while no such ideal of explanation has been worked out for those vital phenomena, if any, which elude explanation by these methods.

The problem that I find the most interesting of all is the legitimacy of applying these ideals of explanation to the study of the human mind. There is no doubt that many of the advocates of the different forms of psychological study have been more or less consciously aiming in this direction. It is particularly clear in the case of those who advocate the methods of laboratory experiment and measurement as the proper means of pursuing psychological study. But it also comes out in the

adoption of Psycho-Physical Parallelism as the proper presupposition of psychology. Parallelism depends for its strength upon the assumption, which has already been discussed, that a series of phenomena can only be understood or explained in so far as they are reducible to an identity, at any rate of quality. That is why it seemed impossible to give a physical fact as the explanation of a mental fact or *vice versa*. As far as observation goes, there is no warrant for this assumption. It has more than once been pointed out that if we really adopted Mill's doctrine of Induction and regarded causation as merely the invariable sequence that we observed, there would not even be any meaning in raising the question whether a physical event could be thought of as the cause of a mental event.

The adoption of this ideal of explanation has verified itself by its success in the field of physical science. But the same claim could hardly be made for it in the study of the mind. Nor have we any justification for assuming that the ideal of explanation which has been successful in one field must, or can be, made to apply to another. What the analogy of the physical sciences does suggest is that a branch of study, like Psychology, is only likely to make real substantial progress if we start with a clearly worked-out notion of what our ideal of explanation is. It would suggest that the statement quoted early in this paper about the reason for the comparative lack of progress in Psychology is the very reverse of the truth and that the chief reason for this lack of progress is that we have rushed too hastily into the work of observation of facts without making up our minds what we are looking for, and what will satisfy us when we find it. So far from Philosophy being a hindrance to the development of Psychology, the real hindrance comes from the lack of Philosophy. And if I were to find a title which expressed what is to me the chief moral of this paper, I should probably call it *Prolegomena to a Plea for a Philosophy of Psychology*.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C.1, on February 15th, 1926, at 8 p.m.*

VIII.—SOME PERPLEXITIES ABOUT TIME: WITH AN ATTEMPTED SOLUTION.

By R. G. COLLINGWOOD.

I.

By way of preface, I will enumerate certain points with which I do not propose to deal.

(a) There are difficulties attaching to the idea of time in itself, or abstract time, considered apart from all events which are said to occupy or differentiate it. With these I am not here concerned. I am not sure that I think them very important, except from a dialectical point of view; for anyone who finds himself entangled in them may fairly be accused of complaining that he cannot see through the dust he has himself raised. For it is he that has made the false abstraction of time from the temporal events of which alone he has experience; and if he finds the abstraction unintelligible, the remedy is in his own hands.

Another set of difficulties attaches to the question how time in itself is related to temporal events: the question what is meant by *occupying* time. These are no less formidable than the others; but these, too, I intend to ignore. My reason is that these, too, depend on a false abstraction. First we abstract time in itself from temporal events, and then we perplex ourselves about the relation between time and events. But the answer is simple: the problem is one which we have created by making this false abstraction and setting it alongside the facts from which we have abstracted it as if it were another fact.

It may not be a waste of space to point out a parallel to these two false problems : (i) What is the State, in itself, quite apart from its members ? The answer is, Nothing : and that answer is the right answer to all the questions which people ask about the State in abstraction from the persons whose political activities and passivities make them a State. (ii) What is (or ought to be) the relation between the State and the individual ? The answer is, there can be no possible relation between a nonentity and a person ; and that, I think, disposes of another large group of pseudo-problems that encumber political theory.

My perplexities, then, attach wholly to "full" time, as opposed to "empty" time. They are all, so far as I can see, of such a kind that they do *not* disappear when we bring time into relation with space or stuff it full of events or call it an illusion or do any of the other things which are generally held to draw the teeth of its paradoxes.

(b) I shall allow myself to speak of an event, and events in the plural ; but I shall not raise the problem of the relation between the continuity of events and their plurality. We are told by mathematicians that this problem has been solved by the notion of a compact series, which is at once discrete, because a series, and continuous, because compact. I do not see that this is really so. If, between any two terms of a series, there is still a third term, it appears to me that we are still as far from continuity as ever ; for *ex hypothesi* the series *as actually counted* always has gaps between all its terms, and however many terms are interpolated the gaps always remain. We are told that these gaps are filled by uncounted terms ; but no evidence is brought that these terms, however numerous, *fill* the gaps. At most, they will only *occur* in the gaps, and serve to delimit their extent ; and even this is not guaranteed by the definition of a compact series, for that definition does not stipulate that all the gaps between the terms are to be of the same size, or that an interpolated term is to be

interpolated at one point in the gap rather than another. The theory of compact series, in a word, does not meet the facts ; and it is only advanced in the interests of what I take to be a logical error, namely logical atomism, which in its application does not differ very widely from the sensational atomism of Hume, and is amenable to all the same criticisms. I shall therefore assume that an event takes time and is always (i) part of an event which takes more time, (ii) divisible into events that take less ; and that events are in no sense composed of instants or point-instants but always of events. Time is therefore, I shall assume, to be sought *within* events, not in the relations *between* events, except so far as these relations fall within larger events. Thus, I should call the murder of Cæsar and the battle of Actium two events forming parts of one event, namely, the fall of the Roman Republic ; and in this use of words I should confidently claim support from the language of everybody who is not distorting English to defend a thesis.

(c) It is possible to torpedo all inquiries about such a subject as time by saying, "Time is just time ; it is an ultimate fact, a thing *sui generis*, and in seeking to clear up these difficulties about it you are merely trying to explain it in terms of something else, which cannot be done : it is simple, and cannot be rendered intelligible by analysing it into simpler elements : hence there *cannot* be a theory of time, for a theory would be just such an analysis ; nor *need* there be, for we all understand time perfectly well, and all perplexities about it are, in fact, cases of raising a dust and complaining that we cannot see."

The force of this objection is derived from its ambiguity. (i) It may mean that time is something perfectly intelligible, in which case we can reasonably retort that to understand a thing implies either seeing no difficulties about it or being able intelligently to dispose of them when they arise. (ii) It may mean that time is not intelligible at all, but simply an object of immediate

feeling or intuition like a toothache or a blue colour. Such objects, I suppose, are wholly and adequately apprehended by feeling or intuiting them, and the question of understanding them, in any further sense, does not and cannot arise. There is nothing to understand ; and whereas, if you feel or intuit them, you thereby know all that there is to know in them, if you do not, the way to acquire the knowledge is not to reason but to feel or to look. But neither of these accounts holds in the case of time. (i) The confessed inability of the objector to dispose of the difficulties shows that he does not really find time intelligible ; (ii) the admitted fact that difficulties do arise shows that it is not sufficiently grasped by feeling or intuition.

No doubt time, like knowledge and goodness and number, is *sui generis* ; but it does not follow that there cannot be a "theory" of it, if that means a reasoned discussion of the difficulties which are encountered when we try to think about it. And that is the only sense in which I ask for a theory of time or of anything else.

II.

My central difficulty is this :—*All statements ordinarily made about time seem to imply that time is something which we know it is not, and make assumptions about it which we know to be untrue.*

(a) Thus, we say that time flies. But what is the air in which, or the ground over which, it flies ? Nothing, surely, but a system of reference, a temporal system of reference ; in fact, time itself. The movement of time can only be a movement relative to something that is itself time—time regarded as stationary and existing *totum simul*. That, relatively to which time moves, cannot be space ; for what moves relatively to space can only be a spatial object or body. We have, therefore, two times, a moving and a stationary ; and since to be stationary

implies permanence in time, we have a third time in which the stationary time remains stationary, and so *ad infinitum*. If I am told to accept this result in a spirit of natural piety, I reply that I cannot, because it has contradicted the thesis on which it depends : for it now appears that time as such does *not* fly, but that some times fly while others remain at rest. If I am told that my difficulty comes from taking a popular metaphor literally, I gratefully accept the confession that to speak of the flight, lapse, movement, &c., of time is a mere metaphor, and that in using it we are saying what we know to be untrue.

The difficulty is not removed if we say that events move "in" time. Here either (i) the time is regarded as moving with the events, in which case the difficulty recurs in the same form ; or (ii) events are regarded as moving past a stationary frame of temporal references : in which case it recurs in a new form. For events must carry their own time-determinations with them—*e.g.*, an hour's journey, however far it recedes into the past, remains an hour long ; and thus we have once more two times, one moving and one stationary, with results as before. It is not merely events but times that move in time ; which is absurd. (The same difficulty arises in the conception of a body moving in space ; the fact that it recurs there does not make it less serious here.)

(b) Again, we say that time can be measured. But how can it be measured ? We measure (not abstract space, but) bodies by laying measuring-rods against them : that is, by juxtaposing two bodies and thus measuring one by reference, through the other, to a third. This could not be done unless we could move a rod from one place to another ; and the hypothesis of the Lorenz-Fitzgerald contraction brings home the fact that the constancy of the length of the rod is an assumption and no more. But in this sense, which is the natural sense of measuring, we cannot measure temporal events at all. We can observe a rough simultaneity between the beginnings and ends of two events

(e.g., the rotation of a minute-hand and a journey), but only if the two events are going on at the same time ; or, I ought to add, appear to the measurer to be going on at the same time. But we cannot then move the rotation of the minute-hand to another part of time and thus compare the length of the journey with the length of a symphony. For that, we have to use a different rotation of the hand. It is as if we were unable to move our measuring-rods at all, but were compelled to use a fresh rod for every fresh measurement. Then how could the rods be standardized ? Obviously, they could not. But our clocks *are* standardized. Does the difficulty, therefore, vanish ? No ; for we can only standardize two clocks by observing that *at a given time* their hands are travelling at the same pace, and this does not prove that they will travel at the same pace at any other time. And in the nature of the case there can be no possible means of showing either that they will or that they will not ; in other words, there can be no possible method of measuring the time taken by one event relatively to the time taken by another event not simultaneous with it.

If I am told in reply that, after all, it is reasonable to assume that a clock, wound up and kept in order, continues to move uniformly, and that pragmatic results justify the assumption that one "hour"—meaning one rotation of the minute-hand—is the same length as the next, I agree ; but a pragmatic assumption is not quite the same thing as a measurement, and once more it appears that we have said one thing while meaning another.

(c) Suppose, again, we say that time is continuous. What, in saying this, are we denying ? Presumably, that time is discrete. If it had been discrete, it would have had gaps in it. But what would the gaps have been made of ? Nothing but time : any gap in a series of events must be a gap consisting of time, for if there is no time in the gap there is no gap. Clearly, then, time is continuous.—But this does not seem to follow.

That which must be either discrete or continuous must be a quantity. But if time cannot be measured,* it is doubtful whether we ought to call it a quantity; it is, in any case, an unmeasurable quantity, and in this phrase it is reasonable to suspect a *contradictio in adjecto*. We must inquire further.

When one event in time is said to be continuous with the next, the statement is either meaningless or false. Meaningless, if "the next" is simply "that with which it is continuous"; false, if it is assumed that events in time are really packed side by side with no intervals between them. In actual history, events overlap; you cannot, except by a confessed fiction, state the point at which the event called the Middle Ages ends and the event called the Modern Period begins. This is not because our notions of the distinction between the mediæval and the modern worlds are vague and confused. There is no sequence of events, however clearly conceived, that does not show the same overlap; and it is only when our knowledge of events is superficial and our account of them arbitrary that we feel able to point out the exact junction between them, or rather, feel that there *is* an exact junction if only we knew it. In the actual history of events there is, as the theory of compact series insists, no nextness; not so much because there is always something between (though in a sense the facts may be put that way—you may distinguish an intermediate period between the Middle Ages and the Modern Period, and so *ad infinitum*) as because there is no clear beginning or ending.

But if it is said that, whatever is true of concrete historical events, the parts of *abstract* time are continuous, a new difficulty arises. To know that two bodies are continuous, we must know that their separate lengths are together equal to their length overall. This we can only know by measuring and adding the

* There may, evidently, be quantities which *we* cannot measure. But the difficulty in measuring time is not of this kind.

measurements ; and this, as we have seen, cannot be done in the case of time. To put this objection differently : the continuity of any two things presupposes a system of reference other than themselves, by appeal to which we can assure ourselves of the absence of a gap. In the case of spatial bodies, this system consists of the marks on a measuring-rod. In the case of temporal events, it consists of continuous time with its clock-marked divisions. But in the case of time itself, there can be no system of reference except another time, concurrent with but distinct from the first. This second time, assumed to be continuous, can guarantee the continuity of the first by a one-one correspondence of its parts. But how do we know that *it* is continuous ? There is no way of *even assuming* that it is, unless we suppose the existence of yet another time, and so *ad infinitum*. Hence, far less prove, we cannot even assume the continuity of time without surreptitiously assuming another time as a background to it, and assuming the continuity of this other.

(d) A difficulty of the same kind attaches to the statement that time is infinite. This presumably means that time is temporally infinite, *i.e.* everlasting. But to say that something is everlasting means that it lasts all the time ; it implies two terms—that which endures, and the time in which it endures. Hence to say that time is everlasting is to say that, in addition to the time which goes on, there is another time during which it goes on ; and to say that it goes on always means that it goes on as long as this other time goes on. Once more, we are involved in the fallacy of a reduplicated time-series.

This cannot be avoided by pleading that when time is called infinite we only mean that after any given part of time another always follows. For to say this is already to say that one part of time follows after another, and this implies a system of reference by appeal to which we can say that a change or lapse has taken place. We are, in fact, back in the perplexities that arose out of the notion of time as flying or moving.

If, instead of saying that abstract time is infinite, we say that temporal events are infinite, it must again be asked whether we mean infinite in number as succeeding each other in a series of mutually external terms. If so, it must be pointed out that events are not related to one another in this way, as has already been shown ; and the infinity of time seems from this point of view to be only a metaphorical phrase to describe the infinite complexity of that one event which is the history of the world.

III.

It is hardly necessary to pursue further the quest for a statement about time that shall be anything but a conscious and more or less deliberate falsehood ; we should be better employed asking what it is in all these statements that makes them false. Perhaps part of the answer lies in the habit denounced by Bergson (and others before him) as the "spatializing" of time. We imagine time as a straight line along which something travels. Without inquiring too closely what it is that does the travelling, we may ask whether time is at all like a line ; and, obviously, it is not. "Thought of as a line, it would only possess one *real* point—namely, the present. From it would issue two endless but imaginary arms, Past and Future" (Lotze, *Metaphysic*, Section 138). It is difficult to uproot from one's mind the illusion that somehow the past and the future exist, or that the past somehow exists, even if the future does not. Have we not, in memory and in historical inference, *knowledge* of the past ? Have we not, in scientific prediction, knowledge of the future ? And is it not self-evident that what we know must be real ? This seems to be the argument on which we rely when we try to bolster up our belief in the reality of past and future against the attacks of the obvious common-sense reflection that what has been, and what is to be, do not in any sense exist at all. No doubt, the present would not be what it is if the past had not been and if the future were not to be ; but it is a childish confusion of thought to argue that therefore the past and the future are

now real. On the contrary, they are just therefore *not* real. It is just because I have left Euston and hope to get to Carlisle that I am at Crewe and not now in any sense whatever either at Euston or at Carlisle. Euston and Carlisle still exist, but they are not past or future events; the past event of my leaving the one and the future event of arrival at the other are not happening, and an event when it is is not happening is just nothing. It is true that the whole of which they are parts is happening, and that the parts, as we said, overlap one another in the structure of the whole; but this does not mean that the past *as past* continues to exist. What does continue to exist is the contribution it has made to the present.

The point may be illustrated by the way in which many theories of memory have broken down through confusing my present memory of a past event with the present effect of that past event on my bodily or psychic organism. To go about short of a leg is not the same thing as remembering the loss of it, and to suffer a neurotic disability as the result of fear is not the same thing as remembering the fear.* Memory is a kind of knowledge, if it is knowledge, having this peculiarity, if it is a peculiarity, that its objects have no existence of any kind whatever, and that they are known to have no existence. This may seem strange to people who believe that all thought is of a real object existing independently of the thought of it; but the alternative, to take literally the fairy-tale of the place where all the old moons are kept, is surely a good deal stranger.

To spatialize time is to fall into the illusion of thinking that past and future exist but are not "present to us" at the moment. And this fallacy seems to underlie all the ordinary statements about time—that it has one dimension, that it lapses uniformly,

* To give the name "mnemic phenomena" to occurrences arising out of the present effect of past experiences is to encourage, if not to betray, the confusion to which I refer.

that it is continuous and divisible and measurable and infinite and so on—all of which rest on the assumption that a great deal of time, if not the whole of it, exists at any given moment and that we can somehow “go over” it in the same kind of way in which we go over a spatial object with a foot-rule: which we obviously could not do were it not present to us, as a whole, *now*. If this were not so, time could not be a quantity, for a quantity must exist somewhere, somehow, at some time; and when we say that from 1800 to 1900 is a hundred years, we are assuming (what we know to be untrue) that these dates exist now and that we can measure the interval between them. Nor is it better to say “from 1800 to 1900 *was* a hundred years.” Was *when*? Obviously, at no identifiable time: in fact, never.

The first condition of clearing up our conception of time, then, is to stop thinking of it as a special kind of one-dimensional space and to think it as what it is—a perpetually changing present, having somehow bound up with it a future which does not exist and past which does not exist. Poetic imagination may think of the future as lying unrevealed in the womb of time and of the past as hidden behind some screen of oblivion; but these are metaphors, and the plain fact, obvious to anyone who will open his eyes and look at it, is that both future and past, consisting as they do of events that are not happening, are wholly unreal.

No doubt we remember the past and expect the future. But (i) these are not the same. “It is a mere accident,” says a distinguished philosopher, “that we have no memory of the future”; but, accident or no accident, it is a fact. In expecting the future we may, and often do, regard it as necessarily implied in the present, but we invariably regard it as now non-existent. In remembering the past we may regard it as the necessary precondition of the present, but we invariably regard it as non-existent. Yet, though so far similar, memory and expectation are obviously and recognizably different. And merely to say

that one is of the past and the other of the future does not serve to state the difference, because it leaves unanswered the crucial question, "What constitutes the difference between the past (having happened) and the future (being about to happen), granted that both are non-existent?" Attempts have been made to account for the obvious difference by a theory of the universe as an infinite midden or rubbish-heap, in which the outworn states of the present are conserved: the past is thus real and the future unreal, but unfortunately the distinction between past and present has now vanished. (ii) We do not remember *the* past, but only *our* past; and we do not expect *the* future but only *our* future. Hence the appeal to memory and expectation as guarantees of the reality of past and future proves the very opposite of what it is meant to prove: for the past and future which alone they guarantee are a purely subjective past and future.

Our attitude to *the* past is not memory but historical judgment; and this is also our attitude towards what we remember, in so far as we believe our memory to be trustworthy. Our attitude to *the* future is not expectation but something else for which, I think, we have no name, but which we distinguish from expectation somewhat as we distinguish history from recollection. I do not *remember* the battle of Waterloo, and in the same sense I do not *expect* the Aristotelian Society to survive my death; I *hope and believe* it will survive, and distinguish this, as a different kind of attitude, from my expectation of attending future meetings in my lifetime, even if I call it by the same name.

What we know must, I suppose, really exist. And if that is so we cannot really know either the past or the future. I am inclined to accept this consequence, and indeed to embrace it with some satisfaction as explaining why, in common with other students of history, I have found in my historical inquiries that I can never determine the exact truth about any historical fact, but have to be content with an account containing a large and unverifiable amount of what I know to be conjecture. The only

possible object of knowledge, I submit, is something that is real now. Of the past as past and the future as future we can have only conjecture, better or worse grounded. But, certainly, our conjectures about the past and the future are not on the same level, and I cannot dismiss the difference as accidental. Nobody's forecast of European history in the next ten years can possibly be so complete, so detailed, so well grounded, as any half-educated man's narrative of the last hundred years must necessarily be ; and the difference is not, as this illustration might on hasty inspection suggest, a difference of degree. It is difficult to resist the conclusion that the future is as such not only unreal but indeterminate, belongs to the region of possibilities ; and this in spite of astronomical predictions, which are, after all, hypothetical in their very essence and assume the absence of catastrophic or other disturbances. I may be reminded that such disturbances, too, are theoretically capable of prediction ; but this only means that they would be capable of prediction under conditions that can never be fulfilled. Our knowledge of the future, at any rate, is a knowledge of the possible. The past, on the other hand, is equally unreal but is wholly determinate ; it has its being in the region of the necessary but not actual. The past and the future, therefore, both baffle our endeavours to know them, but in different ways and for different reasons.

IV.

We have tried to clear up our ordinary conception of time, and have found it somewhat unstable. We certainly begin by thinking of it "spatially," as something existing *totum simul* ; and we also, no less certainly, begin by thinking of it as a ceaseless flow in which the present, perpetually changing, sloughs off its states into the abyss of the past and acquires new states from the abyss of the future. And realizing, as we all do realize when we think of it, that the past and the future are non-existent, we find these two conceptions of time in mutual conflict. Yet we

cannot very well abandon either. We cannot say that all time eternally exist and that the lapse from one to another is illusory, because that is nonsense. It implies that a given subject simultaneously possesses all the conflicting predicates that it ever has possessed and ever will possess, and fails to explain either how this is possible or why it certainly seems to possess now one, now the opposite. Nor can we say that time is an absolute flux from nothing into nothing through the mathematical point of the present, because that cuts the heart out of the very problem we have raised, namely, the perplexing fact that in some sense we do and must regard this flux not as a pure flux but as a series whose terms, however much they overlap or interpenetrate, really do succeed one another. For if time is a flux, it is at least a flux having determinate character and changing from something definite into something else equally definite. But if the whole truth were the reality of the present and the unreality of the past and future, the present, reduced to a mathematical point, would vanish entirely, and the wholly unreal past and future could contain no determinations of any kind. There would be no past, no present, no future, and no time. The terms of our problem, therefore, demand that *in some sense* we should restore to the past and future their actuality, in order that the present may not be exhausted of all its content. It is essential to the very being of the present that it should be in constant change. But in a purely momentary existence there can be no change; the whole universe is destroyed utterly at every instant and at every instant a wholly new universe is created. There is no *durée*, no continuity, no permanence; and where there is no permanence there is no change, for there is nothing that changes.

My concern is to justify our ordinary view of time; and my perplexity arises out of the fact that this ordinary view contains the two contradictory elements I have described. To think of time "spatially" may be a vice if pursued *à outrance*; but I

hope I have shown that to eradicate this tendency by a one-sided adhesion to the opposite is no less vicious. The problem, therefore, is to find a conception of time which will justify both these tendencies of unreflective thought. And it cannot be solved psychologically, for that would lead straight into the sloughs of subjective idealism and scepticism.

The conception which I would suggest is that we should begin by distinguishing *being* from *existing*, and recognize that there are other modes of being beside existence, as well as what is generally called "subsistence," or the mode of being ascribed to the essences or attributes of the existent. Within being I would distinguish the actual from the ideal. The ideal is the non-existent, but not every non-existent is ideal; *e.g.* a square circle is non-existent, but it is not ideal. The ideal is that which is thought, but not thought as real or existing; and in this class fall the future, which is possible but not necessary, and the past, which is necessary but not possible. The real is the present, conceived not as a mathematical point between the present and the past, but as the union of present and past in a duration or permanence that is at the same time change: the possible parting with its unnecessariness and the necessary parting with its impossibility in an actuality which is at once possible *and* necessary, not (like the abstract mathematical present) neither. Within this present there are, as really as you like, two elements (necessity and possibility), each of which taken singly or in isolation characterizes a being which is not real but ideal -- the past and future respectively. Thus the past *as past* and the future *as future* do not exist at all, but are purely ideal; the past as living in the present and the future as germinating in the present are wholly real and indeed are just the present itself. It is because of the presence of these two elements *in* the present (not merely psychologically or illusorily, as in the doctrine of the specious present) that the present is a concrete and changing reality and not an empty mathematical point.

That which is ideal is for a mind, and has no other being except to be an object of mind. But the ideal and the real are not mutually exclusive. A thing may be ideal and also real. An example of this would be a duty, which is absolutely real in spite of the fact that it only exists for mind. But some things are merely ideal, and under this head fall the past and the future ; unlike a duty, which exists only for thought but, for thought, really does exist, they have being for thought, but, even for thought, have no existence. Hence, if there were no mind, there would at any given moment be no past and no future ; there would only be a present in which the past survived transformed and in which the future was present in germ. The past *as past* and the future *as future*, in contradistinction from their fusion in the present, have being for mind and only so. We do call the past, *as such*, into being by recollecting and by thinking historically ; but we do this by disentangling it out of the present in which it actually exists, transformed, and re-transforming it in thought into what it was. Hence time, as succession of past, present and future, really has its being *totum simul* for the thought of a spectator, and this justifies its "spatialized" presentation as a line of which we can see the whole at once ; it also justifies, so far as they go, subjectivist views of time like that of Kant. But time, as the ceaseless change of the present, is "transcendentally real," and the logical presupposition of any thought whatever ; and this justifies the "pure flux" view of time and its treatment in philosophies like that of Bergson and Mr. Alexander.

But this conception, though the only one I can discover which gives any hope of escape from my perplexities about time, is only open to a logic which conceives the real as a synthesis of opposites and a metaphysic which has abandoned the hopeless attempt to think of all objects of thought as existent. If we must regard the real as a collocation of elements each of which is real by itself and in its own right, we must give up the solution which I have attempted to sketch and find another, if we can.

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W.C.1, on March 1st, 1926, at 8 P.M.*

IX.—LOYALTIES.

By G. D. H. COLE.

"I hate half-hearted friends. Loyalty comes before everything."

"Ye-es; but loyalties cut up against each other sometimes, you know."

Galsworthy.

A GOOD many years ago, I read to the Society a Paper under the title "Conflicting Social Obligations." This Paper is essentially an attempt to develop the line of thought which I then sketched out. In most of the books that I read on Political Theory, the starting point and the centre of the study seemed to me to be wrongly conceived. Most writers, despite their disclaimers of the abstract contrast, seemed to me too much dominated by the problem of "the State" and the "individual," too much concerned with the search for an ultimate principle of "the individual's" obligation to "the State," and too much inclined, in seeking an answer to this problem, to simplify the study of sociality in such a way as to make it valueless as a guide to the practical questions of politics and social organisation.

This artificial simplification of the problem, I felt, beset the "metaphysicians" fully as much as the "individualists." The latter, indeed, presented the contrast in a cruder fashion, treating the State as an artificial mechanism devised for the furtherance of individual aims, and therefore lacking any capacity for natural or teleological growth. But the "metaphysicians," as Professor Hobhouse has called them, were equally the victims of this error. They had seized, from Rousseau and Hegel, the vital truth that "the State" is natural and that its life consists

in the development, in some sort, of a common or general will. But they had assigned these real attributes of sociality to a "State" still conceived far too nearly in accordance with individualist conceptions of structure and practical function. That which belongs properly to the "State" of Hegel they were disposed to assign to the "State" of Locke and Bentham. The metaphysical theory of sociality became in their hands a most dangerous and misleading metaphysic of political government.

In my first expression of my reaction from this point of view, there was a good deal of crudity. I came face to face with "the State" as I found it, in the form of a practical political instrument; but I could find no correspondence between its working and the metaphysical theory which I had been taught. One might, of course, have become aware of this contrast—as many do—without discarding the metaphysical doctrine. But I wanted a practical guide. An ultimate principle of obligation and a teleological view of "the State" did not help me unless I could find some relation between them and the practical problems in which I was concerned. I perceived that, in the past, theories of politics had borne a close practical relationship to political affairs. From Plato to Aquinas, from Grotius to Bentham and Rousseau, not one of the great political thinkers was a mere academician. T. H. Green himself was as much an interpreter of Victorian Liberalism as Locke was of the English Revolution. But the contemporary theorists on whom I was brought up seemed to me mere academicians both in their own thinking and in their interpretation of the great thinkers of the past. The search for the principle of political obligation had become a refuge from the attempt to answer the practical problems of social organisation.

With a keen sense of this sterility, I looked at the world of social thought. Such liveliness as I found there seemed to come

from writers concerned less with Political Theory than with a number of distinct practical causes and movements. In Figgis, in Sorel, and in Thorstein Veblen, in the Marxists and in such sociologists as Gumpłowicz and Ratzenhofer, I found far more lively and useful political ideas than in the contemporary philosophic writers.

There was, indeed, in these latter one vital goodness. They had learnt from Rousseau and Hegel to make the naturalness of the social will their fundamental doctrine. But they had tended to narrow the conception of this will so as to find the expression of it solely in a "State" of whose nature they have given only a metaphysical account, and no working analysis. A doctrine which in the hands of Rousseau and Hegel had been a shearing sword of politics had become, in theirs, a merely pious sentiment.

I went back to Rousseau. And I found, in his *Political Economy*, a passage which seemed to me to illuminate the whole doctrine of his *Social Contract*. That passage I set at the head of my previous Paper, and I need not quote it here. The essence of it was the statement of Rousseau's doctrine of the *moi commun* or "common will," as applying not only to "the State," but also to every form of association and recognized common interest, whether it takes shape in any formal organization or not.

This passage set me to the study of social obligation in a new way. I recognized that, as Dr. Bosanquet said in his pointed "Note" to my previous Paper, "the State" in Hegel is not merely a piece of political machinery, or identified with the government, but a totality of social relationships. But "the State," as government, easily came to be, if not identified, at least treated as the representative of this totality, and no one will deny that both Hegel and the Hegelians were concerned to stress rather the unity or universality of "the State" than the diversity in which this unity was found. Dr. Bosanquet contrasted Hegel

with Rousseau by setting Hegel's "State" as a totality of relationships in contrast to Rousseau's "State" as either a machine of government or the expression of a plebiscitary vote. Herein he was right enough, if the Social Contrast is to be treated as by itself the quintessential and complete outline of Rousseau's doctrine. But it was Rousseau's *Political Economy* and, incidentally, the first unfinished draft of his larger *Social Contract* scheme, that helped me to a different, and I think, a more vital, way of interpreting his thought. Of course, I do not suggest for a moment that Rousseau was either a systematic or an entirely consistent thinker. Such systematization as he attempts in the *Social Contract* tends to spoil his idea. It is more vital in these earlier expressions of it.

Rousseau, then, helped me to see the same underlying basis of common will as the sustaining force, not only of "the State," but of all associations and of all informal human groupings. And he led me to just what I wanted—a principle which would guide me in the study of the parts as well as the whole, and would set again in place the broken links in the chain of which ethical and political theory are, in separation, disconnected fragments. For when once we see that man's sociality is *φύσει*, (that is, in becoming if not wholly in being, in intention if not thoroughly in fact) a matter of a natural will which is not purely individual, we see at once man's relation to "the State" as only one aspect, not different in kind from the other aspects, of his relation to his fellow-men, as it finds expression in his countless social contacts, memberships, associations and loyalties.

Loyalties. In that word I more and more found my clue to the problem of sociality. I called my previous Paper "Conflicting Social Obligations." To-day, I speak not of obligations but of loyalties—in terms not of the Kantian imperative, but of that common sentiment of us all which is the whole basis of our capacity

to live and work together. "What others give as duties," said Whitman, "I give as living impulses. Shall I give the heart's action as a duty?" It is in the living impulse, rather than in the obligation, that the secret of sociality—of the naturalness of human societies—is to be found.

Graham Wallas helped me here enormously. His distrust of what he calls "Professionalism" has grown with him, in these days, to an obsession. But, in *Human Nature in Politics*, he did make just that approach to the study of sociality that I needed. MacDougall and the so-called Social Psychologists I had found exceedingly unhelpful. The more I read them, the more they seemed merely to revive the older abstractions of "Faculty Psychology," in new forms. Their classifications of instincts led me nowhere. But Wallas did set out, though he never quite reached his goal, to look at human behaviour, and especially social behaviour, with the eyes of a keen observer, attempting a real measurement of social phenomena as the starting point for a practical valuation. From his conclusions I often dissented; but his method I saw was right.

I began then, from the standpoint of a practical interest, to attempt a survey of such social facts as came specially within the range of my observation. And more and more the problem stood out in my mind as a problem of loyalties, but no longer mainly of conflicting loyalties. It is true that the conflict of loyalties is apt to occupy a very large place in the discussion of the problem; but this is not because it is the heart of the problem, but because it sticks out. In just the same way psychologists are apt to concern themselves largely with abnormal behaviour, and with the diseases of personality, because these things obtrude themselves on the observation, whereas normality normally does not. It is, however, just as dangerous in social theory as in psychology to mistake the abnormal for the normal,

or to state the problem in terms of the abnormal, because the abnormal instances have received the closest study.

No society, from a bridge club to a nation, could hold together unless a considerable proportion of its members felt a considerable degree of loyalty towards it. So much is, of course, commonplace. It does not exclude either the subjection of one body of men to another by force (of which the history of States affords abundant examples), or the survival, in a condition of suspended animation, of atrophied organizations maintained by their officials (of which a survey of the list of organizations in, say, *Whitaker's Almanac* will provide an overflowing crop.) But these latter bodies, if they have lived at all, have at one time lived by the loyalty of their members, while the most oppressive States have been held together by the loyalty of their oppressing classes. Nothing is done without loyalty. Loyalty is the root of the tree of good and evil conduct.

Obviously, as Galsworthy says, these loyalties "cut up against each other sometimes," as they did in the play from which this quotation comes. But this conflict, while it is to some extent inevitable, is not of their essence. And Rousseau, when he made his momentous discovery of the *moi commun* as the basis of all sociality, misunderstood (doubtless largely for historical reasons) the nature of the loyalties which exist in smaller or "particular" societies, and their relationship to the greater loyalty which he called the "General Will." The following sentence gives the gist of his mistake. "The will of these particular societies has always two relations ; for the members of the association it is a general will ; for the great society it is a particular will, and it is often right with regard to the first object, and wrong as to the second."

This sentence obviously embodies a truth. Each particular association, or clique, or group may have a will and interest of

its own, which is unrelated to, or in conflict with, the will and interest both of other groups and of the community as a whole. It is indifferent to the whole community whether my bridge club plays "auction" or "contract," or whether, in my church, the service is conducted in a cassock or a frock-coat. It is not indifferent if the bridge-players privately mark the cards and then invite strangers to play, or if my church demands the right compulsorily to instruct other people's children in its own ethics and cosmogony ; and on these points the common will of the bridge-players or the Church members may be a will not merely particular in relation to the larger will of the community, but positively hostile.'

So far Rousseau is obviously right. But because the common will of a group may conflict with other wills, individual and social, and may fall foul of the "General Will" of the community, it does not at all follow that this common will is to be regarded, in relation to the whole, as merely particular. This view of it really makes nonsense of the whole doctrine ; for it involves treating the "particular" associations as just what they are not, bodies artificial and unnatural, essentially unlike the greater body in which the "General Will" is supposed to appear.

This does not square with Rousseau's essential doctrines ; for elsewhere (in the first sketch of the *Social Contract*) he recognizes that "the State" itself is, in relation to the world of States, a particular association, and its will, in this relation, a particular will. It is, of course, in this regard a particular will ; but it cannot be a particular will alone. For it cannot, by entering into relation with other wills, divest itself of its own essential character. And this character, Rousseau makes quite plain, is that of generality, not merely in the sense that it is a will of all, but in the far deeper sense that it is a will in individuals who

are willing universally. It is, as I insisted in my *Introduction to Rousseau's Social Contract*, "above all a universal and, in the Kantian sense, a 'rational' will." But, if this is its fundamental character, it cannot put this nature off, or become merely particular into whatever relations it may be caught up. It is at bottom the will of individuals taking a universal form.

We come back then, to the individual as the source of will. But if the individual can will universally in his relation to "the State," which in the world of States is only a "particular association," so also can he will universally in those other groups, formal or unorganised, into which he enters as a social being. He may, it is true, will in his action inside such groups his own private interest or the interest of his friends or of the group instead of willing the interest of the whole. But so may he do any of these things when he is willing as a member of "the State" or of any wider body. It may be, or it may not, that the danger of his willing in a "particular" or an anti-social way is greater in the smaller than in the more inclusive groups. But this does not follow logically; it requires demonstration or disproof. And, if he may will "particularly" or anti-socially as a member of either "the State" or any other group or association, so may he in either case will universally or generally, striving to make his particular group or association a means in its measure to the good of the whole.

The realisation of this truth seems to me important. It connects itself directly with those doctrines which recognize groups and associations, not as *personæ fictæ* or mere creatures of "the State" or the law, but as natural expressions of social personality—with Gierke and Maitland for example. And it is also fully consistent, as Dr. Bosanquet pointed out, with Hegel's doctrine of "the State," and with any view which identifies "the State" with a natural totality of social relationships.

The doctrines, however, which concentrate on totality, fail to bring out the practical bearing of the truth. For the rational totality of the Hegelian "State" is not being but becoming, and the vital question is how it is to become.

Social thinking has, of course, greatly changed during the eleven years since I read my previous Paper. Since then, doctrines of political Pluralism have come greatly to the front. The metaphysico—legal doctrine of "State Sovereignty" has gone markedly out of fashion. Following the march of practical affairs, social theorists have given the "particular associations" a place in their systems. But even if one can take this new attitude as securely established, there is still a great deal of thinking to be done. In especial, the tendency has been so far to study the problem mainly on its institutional side, so as to admit in the particular association a natural capacity for growth and the assumption of fresh functions and purposes, and in "the State" a nearer approach to a federative and pluralistic character. My own view of "the State" as a particular association like and among others has by no means found general acceptance; the tendency has been rather to widen the structural form and constitution of the State so as to bring other associations within it. But I think my view has also gained ground; for it is clear that most plans for widening the "State" as an instrument of government, or for giving it more a federal structure leave outside a vast network of groupings and associations in which also the principle of natural sociality and growth must be entirely admitted.

This way of looking at the problem from the standpoint of institutions is valuable and necessary. But the time has come, I think, to look at it more closely from the standpoint of the individual himself. I insisted on this point in my previous paper, and it is to some extent stressed in Professor Maciver's *Community*. But it has not, directly at least, received nearly enough attention.

I stated the point before chiefly in terms of the possible conflicts of social obligations. As soon as the plurality of loyalties or obligations is admitted, and various groups and associations are seen as the points of focus for these various loyalties, it becomes plain that the individual will or conscience, guided by the consideration of right, is the sole rational arbitrator of such conflicts. There is not an automatic or overriding loyalty of right to "the State" or to any group or association; there is a principle of universality in the mind of man, and in this lies the final standard of obligation.

So far, so good. But this way of stating the problem is really unsatisfactory. For it stresses the possible conflict, instead of the positive contributions which all these different loyalties can make to the common good. The best community is that which, in a positive fashion, establishes the closest harmony among its members in working towards a common good. This harmony is fully as much the harmony of associative and group life as of the individual life in a narrower sense. The making of "the State," in Hegel's sense, is then the eliciting of the good will in us all, so that it penetrates every aspect of our life, and so that our private and associative actions tend, in the greatest degree, to take shape as contributions to the common good.

The idea from which we have to escape is that, because this good is a common good, and has about it a final unity and universality, it is therefore to be sought mainly along a single road. We have to get away from the error (historically natural in Rousseau and the Benthamites, but most unnatural and perverse in Professor Wallas*) that particular associations are primarily conspirators or that the will of the individual in "the State" is

* In what I say here of Professor Wallas I am thinking of *Our Social Heritage*—that is, of his latter-day views. I have the greatest admiration for his earlier work.

different in kind or content, or naturally superior, to his will as a member of any social group to which he may belong. We have come rather to the positive idea of the social will as finding its fullest expression where the wills of individuals find *their* fullest and most diversified expression through a rich variety of free associative life.

But this associative life and will, I have agreed, is, like the wills of the individuals who make it up, potent for evil as well as good. It is, therefore, a vital question whether "particular" associations tend to encourage rather social or anti-social motives. Professor Wallas appears to tend more and more to the latter view; but is this opinion finally reconcilable with any save an anarchist conception of sociality? For why should men in their particular associations be more anti-social than they are either in their private lives on the one hand or in their relations to "the State" on the other? As for the State, no one accepts Rousseau's statement that the General Will is automatically realized by the cancelling-out of particular wills; but, unless this statement is accepted, there is no *prima facie* or *a priori* reason for expecting men to act more socially in the affairs of the State than in any other sphere. Nor is there any reason for drawing such a distinction between their private and their associative actions, save in a sense which makes equally against "the State" and particular associations.

There is, indeed, a very real and important sense in which all forms of organization, since they involve some degree both of mechanization and of abstraction, involve in some degree a distortion of the wills of the individuals who enter into them. Co-operation always involves sacrifices as well as gains. But, unless we take the anarchist view that the sacrifices necessarily outweigh the gains, the recognition of this fact has no bearing on our present problem. It applies to all organized group life,

and perhaps in greatest measure of all to "the State," as the largest and most complex kind of continuous association.

Men's motives are mixed, both in their private acts and in their "State" acts, and in those acts which they perform as members of any group or association. Some groupings are, of course, far more important than others, and have far greater power to contribute a value or a disvalue to the common life, in proportion to the strength of the loyalty which they excite in their members. And if, in our fear of anti-social loyalties, we frown on this associative life, we dismember community, and deny to it essential means of social self-realisation. Nothing is potent for good, without being potent for evil also.

We recognize that both men and "States" may be, on balance, good or bad. But those of us who are not anarchists work for the self-realization of man through some form of "State" action, though we know the "State" may turn out wrong as well as right. We believe that, on the whole, sociality makes for good, and tends towards unity of us one with another in pursuit of the common good. If this view holds good in relation to "the State," it holds good also of particular associations, which have also their vital contribution to make to the common life.

What, then, are the causes which make for this inter-working of private, associative and "State" life in the common good? The condition clearly is harmony. In order that there may be a common good to which all can know how to contribute, there must be at least the broad conception of a common plan. The association, like the individual, must have some knowledge of his "place" if it is to set up for itself any satisfactory standard of social behaviour. In other words, the inter-working of the associative life must be consciously and purposefully promoted. The doctrine of "function," Plato's master-concept in politics, is vital for the association as well as for the individual.

The harmony has, indeed, its seat in the minds of the individuals. But it will be constantly thwarted in its expression, and anti-social motives will receive constant stimulus at the expense of social motives, if, for any reason, the institutional life of the community fails to correspond to its vital needs, or if the "State," for any reason, is more concerned to thwart than to develop the associative life. For in this case the loyalties as well as the institutions get into conflict, and men, without losing their sense of the social totality altogether, set up in their minds steep barriers between their group and their "State" loyalties. This both tends to a stressing of the particularism of the groups, and sets up a destructive moral conflict in the mind of the individual.

The political philosophers of nineteenth century England, with all their sharp differences, tended from opposite extremes to this vice. The Benthamites in their hostility to particular associations exalted not "the State," but a mystical and immanent harmony to be realised by *laissez faire* methods. They did their work of destruction, and produced for a brief space, in mid-Victorian England, the illusion of a lasting harmony. But they left out power of association, and were therefore incapable of facing the new problems which took the place of the old. Their harmony dissolved in a welter of Imperialist and Socialist doctrines.

The Hegelians, on their side, with all their grip of the need for organizing sociality, and for all their master's grip of Society as a being rather than a becoming, so whelmed the individual in the universal as to negate in practice the doctrine which they affirmed in theory. Refining the real will into the rational and universal, they lost hold of men as they are and flew away into the clouds. In their Cloud-Cuckoo-town, sociality could be fully expressed through a perfect scheme of universal State-hood in

which all loyalties could find a coordinated meaning. But this doctrine, when it was brought down again to the actual world, tended to an exaltation of the actual "State," and to a demand that everyone should treat it as the representative of the ideal State, and should subordinate all his purposes to it. In this form, it became an argument for tyranny, and an invariable justification of things as they are. While it recognized associative life as part of the State life, it tended in practice to regard all associations with suspicion, unless they were prepared to subordinate themselves utterly and unconditionally to the actual "State." In this way again, a destructive mutual conflict is aroused.

I am not suggesting that this was all the philosophers' fault. For philosophers, like other men, are creatures of their times. Nor am I suggesting that there is any way of setting up a perfect or automatic harmony of the personal and associative life. For circumstances change, and necessitate readjustments in social and political relations. And associations, being natural and not purely mechanistic groupings, have an inherent capacity for growth and change. If a harmony is possible, it cannot be a static harmony. There is no such place as Utopia.

There is, however, a possibility of greater or less harmony in the working of the social principle. And the securing of greater harmony depends, not merely on the avoidance of conflicts and clashes of loyalties in men's minds or between rival groups or associations, but still more on the positive evocation of many different loyalties in the common service. For, if we suppress the grouping in which some particular loyalty finds its expression, we cannot rely on being able to transfer that loyalty to "the State" or to some other grouping which we regard as more appropriate and beneficial. Loyalty is essentially a question of will, and the voluntary principle is therefore vital to it. Certain

groups, such as "the State" itself, must doubtless, from the nature of their functions, possess in a considerable degree a compulsory character. But a wide opportunity for purely voluntary grouping, and for the constant making and adapting of associations as new common purposes develop, is essential to the positive realization of the common good.

Loyalty, I have just said, is a question of will. This is fundamental to my argument; but is it true? I can see some psychologists disputing it, and pointing to the large irrational element that is present in most of our group and associative loyalties. We are born into this group, and flung into that association, by force of contacts, rather than by any clear or conscious assumption of its purposes as our own. Few even of the most loyal members of most groups or associations have fully thought out their intellectual positions in regard to them, or completely rationalized the relationship. Indeed, there is a sense in which one cannot be quite so loyal with reason as without it. For the reasoner may see conflicts of loyalty which are not apparent on the surface.

All this is true enough; but it does not touch what I have been saying. For I am not assuming that loyalties are purely rational, any more than the Kantian assumes that men in fact obey only their "real" or rational will. Loyalties, as we find them, are a mass of instincts, prejudices, customary ideas and assumptions caught up at second hand, selfish and unselfish purposes, ethical strivings and corporate egoisms, all mixed up together. But so, of course, is man, and all that the psychologists have told us of the irrational in man, and all the sociologists have contributed to our knowledge of the growth of man as a social animal, do not affect the fundamental issue. For they apply whatever course we shape, and they do not affect our aim of so arranging the world as to encourage men to act as rationally as possible, and in

doing so to make their irrational subserve their rational purposes and pursuits.

At least, this is so, unless we throw up the sponge altogether. There is, of course, a statecraft (and still more a rhetoric) that appeals deliberately to the irrational and either dislikes or despairs of the rational in man. And there is not one among us who does not often attempt to heighten his appeal to the rational by what he regards as a legitimate attempt to get the irrational as well on his side. All rhetoric, and still more all controversial journalism, embodies such an appeal. Nor can anyone regard it as in itself illegitimate; for what is right for the individual is right for the propagandist also. In our own lives, success depends largely on enlisting our irrational in the service of our rational being; and this is what we ought to do. So must the politician, and so, in a less degree, must the philosopher.

This process becomes illegitimate only when we use the irrational to falsify or obscure the rational, instead of using it to heighten the appeal of the rational. The line is, of course, hard to draw; but so are all lines that are worth drawing. It is, however, plainly passed when, instead of trying to promote a rational harmony of loyalties in the service of the whole, a leader or a class attempts to substitute for such a harmony a single loyalty in which the irrational element is consciously made to preponderate. The commonest example of this is the beating of the war-drum as the means of diverting men's attention from their rational wills to an unquestioning acceptance of the will of "the State." Napoleon I was an adept at this, and he has had many less successful imitators.

It is, however, obvious that Napoleon did manage to attach to himself a great deal of loyalty, and to catch up to his own person a great many loyalties that he had really pilfered from other sources. If he made hay of the old "States" of Europe, he also

made hay of French revolutionary doctrines. I suppose it is facts of this order that make many people sceptical of doctrines which place loyalty at the heart of sociality. Loyalties, they say, are irrational; only obligations or duties have the rational element clearly in a position of dominance.

This is true, but unhelpful; for men are moved by obligations only in so far as they find expression in loyalties. And that community has the best chance of being proof against Napoleonic perversions which can develop the most free and full and harmonious associative life. The French Revolution unwittingly prepared the way for Napoleon by declaring war on particular associations within "the State." Affirming one over-riding loyalty, it opened the way to the men who learned best how to exploit that loyalty. There is safety in numbers of loyalties, not because they must engender conflict, but because they compel comparison, choice, judgment. That community is likely to have the most rational citizens which has the fullest associative life.

And yet it may easily appear on the surface the most irrational. For it is easiest to get the best of an argument by banging all one's adversaries firmly over the head. The "State" which forcibly suppresses, or keeps under, the expression and organization of other loyalties, both presents, if it is successful, an extraordinary appearance of that unity which is easily mistaken for rationality, and does often actually succeed in evoking towards itself a fierce nationalistic loyalty. Napoleon's France and Bismarck's Germany both achieved this; even Mussolini's Italy has achieved something of it. But such unity is in fact highly irrational, as readily appears in the external relations of the "States" which rely upon it. A good "State" ought to be a good member of the comity of nations; but such "States" most emphatically are not.

The free burgeoning of associative life is, however, by no means.

an automatic method of securing the good health of the body politic. It is essential to good health ; but "the State" may suffer from other diseases. In particular, we have seen that harmony among the various expressions of the associative life is a vital need. What is this harmony ? It depends, first of all, on a basis of common ideas and assumptions broad enough to sustain the citizens in their common life, and finding substance in a set of social institutions which most people regard as, in essence, fair and reasonable. If this condition is not realized (and it is not over a large part of the world to-day) the basis for the harmonious working of the associative life is knocked away, and men group themselves into rival factions, and develop essentially conflicting loyalties, based upon their rival conceptions of social justice.

When this situation arises, society is in peril until either one of the rival conceptions triumphs, and compels a reconstruction of the social order, or a new synthesis is reached. But to put the matter in this way is to ignore the vital character of such conflicts as I have been discussing. For divisions so vital do not develop without good practical warrant. They arise, as Marx made clear once and for all, from changes in the problem itself—that is, from changes in the material environment of man and in his command over that environment. Save under the impulsion of forces from outside, they do not arise in communities which are relatively static in their material life. But, when the material basis of life changes swiftly, or when the character of social organization is changed by conquest from without, the harmony of institutions is upset, and the conflict of loyalties and obligations develops apace.

Let us ignore the case of external conquest as immaterial to our present purpose. When the disturbing material forces arise within the community, there is always the theoretical possibility

of adapting by common consent the old institutions to meet the new needs. But, if the changes are far-reaching, they will almost inevitably give rise to strong rivalries and conflicts, because they will menace vested interests which are strongly entrenched and cause the rise of new interests which see their chance in the new conditions. Vested interests and established associations tend to perpetuate themselves beyond the needs they arose to serve ; new groups, with a sense that material forces are on their side, claim a right to ride rough-shod over others. Of such stuff are the great Revolutions of human history.

In such times, it is hard for men to distribute their loyalties. They have to make choice of their course and to cleave to it, backing their faith through right and wrong alike. This is not irrational of them ; for the triumph of a cause is the only way to the re-establishment of a rational harmony. But it is an evil, though it is a necessary evil when once the point of disharmony which is its starting-point has been reached. At all times, men to some extent back their loyalties against their judgment on each particular case. The greater the disharmony of institutions, the more insistently they are led to do this. But their aim is the re-establishment of a harmony which will remove the need for such distortions of conduct.

Loyalties, then, can find free and rational expression only within a harmony which is two-fold—a harmony of men and institutions one with another, on a basis of sufficient agreement about fundamental ideas ; and a harmony of institutions with the underlying conditions of life, so that the institutions of society are consistent with, and help forward, the best use of men's material resources in accordance with their power over nature. Until these major conditions are fairly well satisfied, it is of no use to expect men to behave in accordance with the general will.

For there is no general will which can find expression in their associative life. Loyalties therefore tend, in such circumstances, to present themselves in the superficial form, not of contributions to the common good, but of conspiracies against the "public." But this is because there is no "public" whose interests the associative life can find satisfaction in serving.

The mistake, in such times, is to denounce the particular loyalties on account of the perversions to which they are subject, and to urge their submergence in a unifying loyalty to the whole. Such an insistence is usually ineffective ; for loyalties cannot be easily transferred. But it is also disastrous if it succeeds. For the loyalty which is concentrated on the general by the suppression of the particular is an irrational loyalty, liable to achieve expression in disastrous forms, fatal alike to liberty at home and to fellowship abroad. Rational loyalty to the whole is what we want ; but that is to be achieved only through a harmony of diversified loyalties to the parts. The freedom of voluntary association is the life-breath of its being.



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W.C. 1, on March 22nd, 1926, at 8 p.m.*

X.—NATURALISM AND VALUES.

By J. LEVINE.

I.

NATURALISM, like most general designations of the type, has been used in philosophy to cover a multitude of tendencies. It stands, broadly speaking, for a certain attitude to the world, or a certain belief about the character of the world. But the constituent elements in that attitude or belief have ranged from something properly named mechanism or materialism to something closely resembling pantheism or spiritualism. It seems necessary, therefore, to begin by attaching to the term a definite and precise content, based on such constancy of usage as the history of philosophy can display.

If we do this, we find that naturalism stands for a view of the world the essential characteristics of which are (a) an ideal of simplification, (b) a complete rejection of purpose or design, and (c) a frank disavowal of the belief either in Providence or in the immortality of the soul. Of these characteristics the first is the most important. The ideal of naturalism is to explain the complex in terms of the simple, to reduce the multiplicity of both the physical and spiritual realms to the unity of a few elementary principles. The so-called natural or mechanical sciences, which have admittedly, within their own domain, achieved a considerable measure of success in such simplification, have set up a standard of explanation which naturalism makes universal. It has adopted the methods and principles of these sciences, and attempts to apply them to the entire range of human experience. It holds, therefore, that not only the phenomena of the physical universe, but man's own volitions

and thoughts, his beliefs and visions, his morality and religion, are amenable to exact, calculable treatment, and reducible ultimately to the same simple ingredients as are revealed in the lowest forms of existence. Such is the essential mark of genuine naturalism; and, however short of success it may fall in execution, it holds fast to the conviction that success is intrinsically possible.

The second and third characteristics of naturalism, as described above, follow from the first. The complete acceptance of mechanical causation as an explanatory principle throughout the universe, and the determination to reduce all the phenomena of life to quantitative variations of a few simple laws, leave no room for either purpose or Providence. The machine has to run itself. Ultimate explanation is presumably an ideal born of man's ignorance or conceit.

II.

As thus defined, Naturalism may be said to date back to the Greek Atomists, Leucippus and Democritus. "Nothing arises by chance, but all things by reason and necessity," is a credibly reported saying of the former*: and the subsequent history of Naturalism exhibits merely the gradual extension and more complete verification of this principle. The Atomists themselves tried to work out their view consistently and thoroughly. The universe, for them, represented nothing but the purposeless play of inert particles of matter, the incessant collisions or configurations of which are responsible for the multiplicity and variety found in human experience. But their scientific background was so undeveloped, comparatively speaking, that this form of Naturalism appears for the most part dogmatic and conjectural.

* Diels, *Fragg.*, p. 350.

With the re-emergence of Naturalism at the time of the later Renaissance, when the first fruits of the newly launched enquiries into the universe by the methods of the natural sciences were presented to a mediævally attuned generation, the case is different. Naturalism soon grows apace. Neither Bacon nor Descartes, it is true, was consistent. They both exempt religious knowledge from the domain of natural law, and Descartes shrinks from extending his mechanical principles to the explanation of human behaviour. But their successor, Spinoza, is at once consistent and thorough. His philosophy exhibits the characteristics of genuine Naturalism with a logical ruthlessness and whole-heartedness that not even the modern Behaviorists he anticipates can rival.

"Nature," Spinoza writes, "is always the same and one everywhere." There is one ideal type of explanation, that of the mathematical or mechanical sciences. Hence, he goes on, he will regard human actions and desires exactly as if he were dealing with "lines, planes and bodies."* Spinoza speaks, in another work, of "the eternal order of universal nature, of which man is an atom," and claims that he offers a treatment of human passions and emotions, human volitions and aspirations, genuinely scientific. They are, he says, merely "properties" of man's nature, "just as pertinent to it as are heat, cold, storm, thunder and the like, to the nature of the atmosphere."† There is, of course, no free will in Spinoza's system. The belief in final causes is the last refuge of ignorance. Everything in the universe is necessarily what it is, and all conceptions of good and evil, value, meaning or the like, are relative to man's own finite outlook and standards. In short, there is one all-comprehensive Being or Existence, Nature or Substance, which just is what it is, and from the nature of which all things necessarily follow.

* *Ethics*, Part III, Prefatory Note.

† *A Political Treatise*, vol. ii, 8, and vol. i, 4.

If the ideal of Naturalism be simplification, Spinoza's system appears to be the most complete expression of that ideal it is possible to conceive.

While the application of naturalistic principles to mind is nowhere so complete as in Spinoza, there is a steady naturalistic tradition, in morals at least, throughout the modern period. Moral conceptions, it is held, are the necessary outcome of properties or tendencies in human nature originally non-moral, and the laws of human behaviour are reducible, in ultimate analysis, to the laws which govern the behaviour of material particles. Hobbes, for example, endeavours to maintain some such position, and Hume, in the following century, belongs to the same tradition.

The main impulse to Naturalism, however, in modern times has come from the gospel of organic evolution. The specific factors, or the exact mechanisms, by which the complex forms of present living matter have emerged or developed from preceding simpler ones, may not yet be fully understood: Natural Selection, or Survival of the Fittest, offers loopholes for criticism. But of the *fact* of such evolution there seems no room for doubt. Now the whole tendency of an evolutionary interpretation of experience, it is clear, coincides with the most cherished principle of Naturalism, the reduction of the complex to the simple. A Monistic creed is its most fitting accompaniment. Reality is one in character, and continuous in its manifestations. The highest so-called human or spiritual achievements—love, truth, beauty, goodness—are but exceedingly complex patterns of elements present in some form at every level of existence.

The extension of this creed to every domain of human activity has been gradually making headway. The mechanical categories have been invited to demolish the whole structure of man's conceit, his "civilizations," his "religion," his very thought itself. The most recent psychology has no place for either mind or

thought. Only the measurable, observable changes in physical or chemical entities are worthy of consideration. Thinking, according to the Master-Behaviorist, is merely the language habit, exercised implicitly, "behind the closed doors of the lips."* The study of endocrine patterns, it is urged, will prove more profitable, as well as more scientific, than the speculative discussion of such chimeras as personality, mind, spirit, and the like.

Nor is there any significance in complexity itself, any peculiar property of man which has inspired the whole process of evolution, and which gives promise of ultimate attainment of some kind. The notion that there exists in man some impulse towards perfection, some urge towards progress, is, according to the founder of Psycho-Analysis, for example, merely "a pleasing illusion." "The development of man up till now," Freud writes, "does not seem to need any explanation differing from that of animal development." †

Even from such a brief sketch as this, therefore, it can be readily seen how persistently the naturalistic method has won more and more ground. The principle of explanation, that of mechanical causation, remains the same, from Democritus to Watson. Naturalism is always opposed to the idea of purpose. It encroaches gradually on every sphere of man's experience, bringing ever more and more territory beneath its sway. Everywhere throughout the universe, it urges, runs the same fundamental law, the same pattern of antecedent and consequent.

III.

The outcome of the whole movement described above may, perhaps, be best presented in a passage from Bertrand Russell's *A Free Man's Worship* as follows:—

"That Man," he writes, "is the product of causes which had no prevision of the end they were achieving; that his origin,

* J. B. Watson, *Behaviorism* (1925), p. 180, footnote.

† Freud, *Beyond the Pleasure-Principle*, p. 52.

his growth, his hopes and fears, his loves and his beliefs, are but the outcome of accidental collocations of atoms ; that no fire, no heroism, no intensity of thought and feeling, can preserve an individual life beyond the grave ; that all the labours of the ages, all the devotion, all the inspiration, all the noon-day brightness of human genius, are destined to extinction in the vast death of the solar system, and that the whole temple of Man's achievement must inevitably be buried beneath the débris of a universe in ruins . . . all these things, if not quite beyond dispute, are yet so nearly certain that no philosophy which rejects them can hope to stand."

"How," the same writer goes on (and this is exactly the problem of the present paper), "in such an alien and inhuman world, can so powerless a creature as Man preserve his aspirations untarnished ?"* How, in other words, can we retain our ideals, or values, on the hypothesis of Naturalism, with its constantly increasing tale of victories won, positions ceded, suggestions vindicated ? Such, quite simply stated, is the issue it is intended to discuss.

IV.

The older criticisms of Naturalism, it must be confessed, have little more than historical interest now, so rapidly have the defences of the opposing creed crumbled. The argument from design, for instance, which for so long was a solid entrenchment of Theism, has been abandoned in face of persistent naturalistic elaboration of the hypothesis of biological adaptation. If we would appraise the respective merits of the naturalistic hypothesis and its opposite, we can probably find no more apposite example than the writings of Lord Balfour, who refers indeed explicitly to the argument of his two series of Gifford Lectures

* *Mysticism and Logic*, pp. 47-48.

as "a denial of Naturalism." The modern phases of the controversy are nowhere so impressively illustrated.

What, then, are the features of Balfour's defence? It is, he says, an argument based on "intrinsic value." He insists that intrinsic value cannot be reduced to survival value, or explained in terms of any biological or naturalistic categories. If these highest experiences of man, the experiences of goodness, truth, and beauty, are to be reduced to the level of naturalistic explanation, their value is lost. We cannot possibly show, he writes, that the æsthetic tastes we possess, for example, have emerged in the struggle for survival because in some way they are conducive to successful adaptation. How, he asks, can the principle of Natural Selection, or survival of the fittest, account for moral and æsthetic values? How can it account for, say, philosophical speculation itself? "Why should faculties, 'designed' only to help primitive man, or his animal progenitors, successfully to breed and feed, be fitted to solve philosophical problems so useless and so remote?" *

On Balfour's showing, it is absolutely impossible to reduce these "values" to physical, chemical, or biological entities. It is not a question of greater complexity merely: it is a radical difference in quality. There must be, he urges, some *congruity* between the links of a chain which we are convinced is a chain. What congruity, however, can we detect between "the blind transformation of physical energy" and the æsthetic and ethical emotions? † There is, he insists, complete *incongruity* between "our feelings of beauty and a materialistic account of their origin." ‡ Ethical ends, similarly, "appeal to our judgments of intrinsic value." § Naturalism, therefore, is rejected by Balfour. "All creeds," he writes, "which refuse to see an intelligent

* *Theism and Humanism*, p. 258.

† *Ibid.*, p. 70.

‡ *Ibid.*, p. 51.

§ *Ibid.*, p. 118.

purpose behind the unthinking powers of material nature are intrinsically incoherent." * Naturalism, in short, breaks down "where it is most required, namely, at the highest levels of value." † The naturalistic method, which traces patterns of antecedent and consequent, may perform a useful service in exhibiting origins: but the question of origin is distinct from the question of value. To "explain," as Naturalism or scientific method understands the term, is not to demolish or refute or destroy present value. Such, in a word, is the substance of the argument.

Is this defence tenable?

V.

It proves really, if we examine it, to be little more than a dogmatic assertion of faith. The steady movement of scientific analysis has shown that there is far less "incongruity" than Balfour feels between the highest experiences of æsthetics and morals, for instance, and their simpler natural antecedents. If it be argued, say (a) that morality as a whole is nothing but an obviously necessary biological instrument for the attainment of social co-operation, solidarity, cohesion, and security: that it has a clear survival value, therefore, and is bound to be emotionally tinged in our experience with the strongest affect of which we are capable: and that the so-called categorical imperative is merely a form of taboo, paralleled in certain abnormal individuals by various types of compulsion neurosis, and having therefore no mystical or intrinsic significance: can mere dogmatic asseveration of intrinsic value avail much? Or if it be argued

* *Theism and Humanism*, p. 257.

† *Ibid.*, pp. 259-260.

(b) that æsthetic satisfactions are merely complex, elaborate forms of instinctive tendencies to phantasy, day-dreaming, and the like: that the highest æsthetic experiences are only felt to be more satisfying because they appeal to wider, more complex needs and tensions: that in origin such satisfactions are emotional outlets bound up with reproduction and primitive sexual wants: can the mere insistence that æsthetic satisfactions are somehow different from all this constitute an adequate refutation of the view?

Or if it were to be argued (c) in reference to philosophical speculation itself, mentioned by Balfour, that it amounts to no more than an expression, by some tortuous path, of a primitive impulse of curiosity which may normally have a biological significance, but in this case reflects merely the aberration of the philosopher's mind, just as the ravings of a patient suffering from *Dementia Præcox* reflect the aberrations of *his*: that in both cases there is nothing but material for the psychologist and the student of verbal forms: that the ultimate "explanation" of both is the fact that they somehow satisfy the tensions of abnormally constituted individuals: does our immediate response of ridicule to such a suggestion constitute an adequate defence of the sanctity and intrinsic importance of philosophical speculation? Philosophers, at least when commenting on the work of their opponents, have not hesitated to use language almost as disparaging.

Apart from such extreme suggestions, however (and I know of no Naturalist, I admit, who would go so far), there is a certain weakness in the conception of intrinsic or metaphysical value, as it is called. It is bound up with too much abstract intellectualism. While Balfour is prepared to distinguish origin and value, and rests his whole argument, in fact, on such a basis, we find that other writers who have made the concept of value their special province, such as Professor Urban, dispute this

very antithesis. The separation of origin and value, Urban says, "destroys the essential condition of philosophic intelligibility." * How can one, in the face of such diametrically opposed views, attach much importance to the whole elaborate edifice of argumentation based on "intrinsic" value?

VI.

If we are to come to grips with Naturalism decisively, we had better yield, to begin with, the ground to which it is entitled. What is the case, really, with regard to values? Can we analyse the conception in terms which Naturalism must itself admit?

Every fact of human experience, it is clear, occurs within some setting or context, a context which, for our present purpose, may be limited to the life of the individual experiencer. The fact experienced takes on its specific hue or colouring, its warmth or coldness, as it were, from this context or setting. It is the relation of the fact to the rest of the experiencer's life, to his habits of response and tensions, his interests and wants, that gives to any new fact of experience what we call its "value." The value, we might put it, is an aspect of the experience, an aspect *constituted by* this relation. It is not an abstract quality, the intrinsic property of certain metaphysical entities like truth, goodness, and beauty. A simple example may perhaps be adduced. Suppose the fact of experience is a human being responding to the stimulation provided by the London Symphony Orchestra rendering Beethoven's Fifth Symphony. What determines or constitutes the "value" of the experience? Surely, the relation of the present stimulation to the rest of the being's past experience. If habits of response, conforming to the standards of Western musical appreciation, have previously been

* *Philosophical Review*, 1923, pp. 452 ff, *passim*.

formed in the listener, and if he has previously undergone emotional experiences of joy and sorrow, passion and love, suspense and wonder: then the present stimulation comes to him charged with æsthetic tone. It evokes his deepest chords, rouses his profoundest feelings, and therefore has "supreme" value. But if the listener were a Hottentot, devoid of the above musical experience, there would be no æsthetic, "intrinsic" value. The stimulation might provoke superficial interest, faint liking or boredom, and so initiate new habits of response in the Hottentot, and to this extent have "value." But it is clear that the æsthetic value really consists of relation to a complex experience. It is not a mystical, inexplicable quality, testifying in itself to ultimate cosmic properties. It is bound up with the actual context or setting within which it occurs, with the system of wants, tensions, habits, acquired responses, that make up the experience of the individual to whom the new fact or stimulation is presented.

Such an analysis of value, it is interesting to note, is confirmed by certain writers on metaphysics itself. The most illuminating treatment of the theme is found, I think, in the works of S. Alexander. He rejects the "intellectual" concept of value entirely, and adopts frankly what can only be called a "naturalistic" view. If I understand his position, it is this:—

Minds, it is premised, are finite entities, like external objects. They are not entitled to a privileged position in the ranks of existents, but are simply "the most gifted members known to us in a democracy of things." * Values, it is maintained, are rooted in natural things. Morality, for example, is merely a specialized type of "natural" good and evil. "Practical values begin before morality."† Or again, "The moral character in its contrast with the immoral one is a particular instance of the

* *Space-Time and Deity*, vol. i, p. 6.

† *Ibid.*, vol. ii, p. 284.

contrast established within the organic world between the successful type and the individuals which conform to it, and that which fails in competition with it and in nature tends to destruction."* More generally, it is argued, Value exists "below man, or reflective consciousness, and is found in its essential features on the level of mere life, amongst the plants and animals."† In short, the values strictly so-called, that is, the "intrinsic values," "are but the highest instance we know of a feature of things which extends over a much wider range, and is founded in the nature of Space-Time itself."‡

Here, it is evident, is an account of value which can only be regarded as naturalistic. Alexander's analysis of the experience of value itself closely conforms to that given above. Values, he says, are bound up with *human* appreciation, human purposes, etc. "They imply the amalgamation of the object with the human appreciation of it . . ." § If we suspect that the introduction of the term "appreciation" conceals a *petitio principii*, the suspicion is removed by Alexander's further analysis of appreciation itself. It consists of response to "coherence" in the object valued. But, Alexander adds, the coherence is not in the object itself, taken in abstraction. It emerges only in relation to an appreciating mind. "There is no property of coherence in reality itself. Coherence is a property of the perspectives which we have ourselves selected; it is we who take them piecemeal, and we who reunite them." || Value, in a word, is neither subjective nor objective, but is generated in certain relations between mind and object. "Values belong to the object as it is possessed by the mind and not outside that relation." ¶

This same emphasis on the relational character of value has recently been stressed, too, by a writer of so different a school as

* *Space-Time and Deity*, p. 285.

† *Ibid.*, p. 308.

‡ *Ibid.*, p. 311.

§ *Ibid.*, p. 238.

|| *Ibid.*, pp. 258-259.

¶ *Ibid.*, p. 243.

W. R. Sorley. "Intrinsic values," he says, "do, as a matter of fact, always require persons as their bearers: nothing is ultimately of worth for its own sake except persons or some quality or state of a person."* Again, "the reference to life—to personal life—is always present where value is predicated; and it is this reference which marks the objectivity of value and at the same time distinguishes it from the objectivity of positive science."†

VII.

If we accept, then, an analysis of Value such as has been given above, what effect has this on the problem raised in this paper? Is Naturalism completely vindicated? Has it captured our last line of defence too, and is it now in undisputed possession of the field?

There seem to me to be three broad considerations worth remembering before we decide.

(a) First of all, granted that values are bound up with human appreciation, or personal life, as Alexander and Sorley put it, has Naturalism, we might ask, presented as yet a complete account of *Personality* in terms of physical and chemical processes? Has it successfully analysed Mind or Consciousness into physical or chemical elements? The extent to which Naturalism can do this is obviously of critical importance. But mechanistic biology is far from being universally accepted even now. Mr. Needham, who devotes a long and searching article to this theme in a recently published book,‡ examines the whole position exhaustively. Yet his final answer leaves the problem still a problem. "Mental

* *Contemporary British Philosophy*. Second Series. (1925) pp. 252-253.

† *Ibid.*, p. 254.

‡ *Science, Religion and Reality*. Sheldon Press, 1925.

processes," he concludes, "cannot possibly receive explanation or description in physico-chemical terms." * Again, "As far as mental life is concerned biochemistry and biophysics have no authority." † A physico-chemical system is admittedly one aspect of man's nature, but it is only one aspect: and the mechanistic hypothesis, which is valid for that particular aspect, does not necessarily commend itself to the interpretation of the whole of man's nature.

This consideration, it may be replied, is vague and unsatisfactory. It merely points out that Naturalism has so far failed to achieve a complete success. But in so far as it insists that complete success is intrinsically impossible, does it not rely for the most part on mere dogmatic assertion once more? May it not be that personality is a matter of endocrinous glands after all? The consideration, then, is not conclusive one way or the other.

(b) There is, however, a second consideration, perhaps more fundamental and helpful. It is bound up with the character of the naturalistic procedure itself, its presuppositions and methods. An unusually illuminating statement of these is to be found in a recently published article by Professor Eddington. He shows convincingly that the scientific conception of the world is an *abstraction*. It is "the common element abstracted from the experiences of individuals in all variety of physical circumstances." ‡ The world with which physics deals is not the actual world of concrete experience, tinged as that world is with human, mental, or valuable aspects: it is an abstraction from this, consisting of "pointer-readings." "In its actual procedure physics studies not these inscrutable qualities (massiveness, substantiality, etc.) but pointer-readings which we can observe." §

* *Science, Religion and Reality*. Sheldon Press, 1925, p. 250.

† *Ibid.*, p. 251.

‡ *Ibid.*, p. 196.

§ *Ibid.*, p. 199.

The entities about which physical laws are established bear as much resemblance to the actual qualities of reality as "a telephone-number resembles a subscriber."*

Reality as experienced is widely different, in fact, from the metrical aspect of it which physics puts under the microscope. Yet it is only to the degree that we can abstract from the non-metrical aspects of reality that we can construct our so-called exact sciences, like physics and mathematics. The procedure of science, or Naturalism, is therefore limited, if not arbitrary. The data of which experience consists have nearly always non-metrical aspects. Yet such aspects, because they have not the "specialised property of measurability," are inevitably excluded from the purview of science.

Naturalism, therefore, having taken as its ideal the methods and principles of the mechanical sciences, must surely abide by the limitations of these methods. The categories with which it works are pre-eminently fitted to deal with the metrical aspect of reality; and all reality, we might even admit, *has* some metrical aspect. But the nearer we come to actual, concrete experience, to the realms of the mental and social sciences, for example, where to abstract merely the metrical aspect is to distort and do violence to the facts, the less exact our results must become, and the less adequate the naturalistic procedure proves.

The admission of this consideration may involve metaphysical difficulties, it may be said. Are we to hold that reality is of two types, physical or metrical and spiritual or non-metrical? Or is reality the same all through, as Spinoza urged, having a non-metrical aspect in the lowest grades of physical existence? On either hypothesis, however, the *significance* of values can be logically maintained. For the world as Naturalism constructs

* *Science, Religion and Reality*. Sheldon Press, 1925, p. 199.

it is clearly a closed system, ultimately dependent on something beyond itself, something which we may variously call mind or consciousness or spirit, but which at any rate contains the clue to the nature of value.

(c) There is, in the third place, a consideration that may appear trite, but cannot be omitted. Naturalism, we have seen, is an attempt to explain the complex fabric of experience in terms of its simple ingredients. It takes experience as an ultimate given, beyond explanation, and concentrates on the *internal* analysis of the experience, bit by bit, pattern by pattern, law by law. But can the disclosure of the internal structure of experience, its reduction to simpler and simpler forms, be fairly substituted for an explanation of the fact of experience in general, of the existence of anything at all, of the significance of experience as a whole? Granted something exists, granted that the present form of that something has been shown by Naturalism to be the outcome of antecedent forms, does this account for the existence of any form at all?

This consideration has been used, in a much less bald manner, by many idealistic writers on Value. In Bosanquet's analysis, for example, it is clear that his standard of value is really the whole, in all its interrelations; the world of reality as a whole. Bradley says somewhere, is the world of values. The consideration, in fact, is no more than one form of the argument for some metaphysical doctrine of an Absolute.

Of these three considerations, then, the second is probably the most decisive. The real weakness of Naturalism lies in the limitations of its method. We are not entitled to assume that the mechanical categories fit every aspect of experience. Naturalism, starting from an aspect of experience which is metrical, but non-valuable, arrives admittedly at exact laws and metrical expressions of that experience. But why may we not start from those aspects of experience which *are* valuable,

if non-metrical? Is it not sheer dogmatism to elevate the procedure of the natural sciences to a position of exclusive authority, and to reject as phantasy or illusion every non-naturalistic hypothesis? It seems clear that Naturalism does not in any sense destroy value; it ignores it. The hypothesis that there is value in life, and the hypothesis that there is not, are both tentative; that which better fits every aspect of experience is the one we should accept. It may be that no hypothesis about life as a whole is capable of being completely verified. But at least it is certain that the naturalistic hypothesis can claim no unique privilege because it rests on a procedure appropriate to a limited aspect of experience.

VIII.

There is a feature of Naturalism itself which may, finally, be mentioned, though it is, perhaps, more suggestive than crucial. It serves to emphasise how deeply rooted in man's life is the *religious* attitude. The fervour with which most forms of Naturalism have been embraced as a substitute for orthodox belief; the thoroughness and even fanatical exaggeration with which the doctrine has been worked out; the tendency it so often displays to pass over into pantheism, mysticism, and the like; are these not significant? Are they not, perhaps, an indication that, through some inner impulse the workings of which are obscured from consciousness, the exponent of Naturalism, at the very height of his repudiation of religion, snatches unwittingly at the refuge he is vainly trying to supplant? It was shown above that Spinoza's system exhibits Naturalism in its clearest, most consistent form. Is it not a little significant, then, that on his conception of Substance, Spinoza, as Balfour somewhere puts it, "lavishes every epithet of religious devotion," that his system as a whole is a sublime religious construction,

that he is a "God-intoxicated" mystic? Did Epicurus and Lucretius not simply substitute a new religious dogma for the old one? Is the evolutionist not driven to supplement his mechanical categories with creative urges, life-forces, and other vitalistic conceptions? May we amend the Horatian tag (regardless of scansion!), and say, *Religionem expellas furca, tamen usque recurret*? And if we cannot drive out religion, how can we deny the validity of Value?

*Meeting of the Aristotelian Society, at 21, Gower Street, W.C.1,
on April 19th, 1926, at 8 p.m.*

XI.—KANT'S FIRST AND SECOND ANALOGIES OF EXPERIENCE.

By C. D. BROAD.

FIRST ANALOGY.—The enunciation of the First Analogy is slightly different in the First and Second Editions of the *Critique*, but I think that the proposition which Kant professes to prove may fairly be stated as follows: "All perceptible events are just occurrent states of perceptible continuant things. And these things have a quantity which can neither be increased nor diminished by natural causes." Kant appears to identify this quantity with mass. We may dismiss the second part of the proposition at once. For Kant thinks that it follows from the first part, and he gives no independent argument for it. Now it is quite certain that nothing of the kind does follow from the proposition that all empirical events are states of empirical substances which can neither come into being nor cease to exist in the course of nature. All that can legitimately be deduced from this is that the *number* of ultimate empirical substances in nature is constant. It does not follow that any of these substances has a magnitude of any kind; or that, if it has, this magnitude must be constant throughout time for each substance; or that this magnitude, though variable for each substance, must always sum up to the same total when all empirical substances are considered.

To this I think Kant might have made the following answer: "It is not enough that all empirical substances should *in fact* be permanent. In order for experience to be possible we must be able to *recognise* this permanence. And this is possible only

if each empirical substance has some perceptible magnitude, such as mass, which is conserved in amount." This answer, however, will not do. For (a) people did manage to date events in time and to distinguish between the subjective order of their sensations or images and the objective order of perceived or remembered events before they had recognised any magnitude, such as mass, to be conserved. Hence the latter cannot be necessary for the former to be possible. (b) The constancy of some perceptible characteristic is no doubt a very important criterion for deciding whether a certain series of events before a certain moment and a certain other series of events after that moment belong to the same substance. But it is never a sufficient criterion. Spatial and qualitative continuity between the two series of events is also important. And the constancy need not be a constancy of *magnitude*. Very often it is constancy of causal characteristics, *i.e.*, of what Mr. Johnson calls "properties" and Mr. Locke calls "powers." So I think that the second part of the First Analogy may be dismissed as a complete failure; and we can now confine our attention to the first part of it. There are two quite different lines of argument, which we will now consider.

First Argument.—I will quote Kant's own words. (*Mar Müller*, p. 149, para. 2, to middle of line 13 of the para.) "Our apprehension of the manifold . . . is always successive and therefore always changing. By it alone therefore we can never determine whether the manifold as an object of experience is co-existent or successive unless there be something in it which exists always, *i.e.*, something constant and permanent, whilst change and succession are only so many modes of time in which the permanent exists." Now this is a mere assertion, not a proof. Can we fill it out and make it more plausible?

I think that what Kant wants to prove is that we could not derive the notion of co-existent events from purely successive

sensations unless we regarded the successive sensations as appearances of persistent substances and their states. Let us try to make up an argument on this supposition. Suppose I have a white visual sensation *followed by* a cold tactual sensation. Very often I shall judge that a white event and a cold event *co-exist* or have *co-existed* in nature. What is involved in this ? (a) Evidently I must distinguish between my sensations themselves and the events of which they are signs. For, by hypothesis, my sensations are successive and I am basing upon them a judgment of co-existence. (b) I must regard my *present* cold sensation as a sign of an *earlier* cold physical event ; or else I must regard my *past* white sensation as a sign of a *later* white physical event. For, if I regarded each sensation simply as a sign of a physical event which is *contemporary* with it, I could not regard the perceived physical events as contemporary when the sensations by which I perceive them are successive. (For the present purpose we may understand by "a white physical event" an event which would manifest itself to any normal person, suitably placed at the time of its happening, by a white visual sensation.)

The question now is : "How can I be justified in regarding a present sensation as a sign of a certain past event, or in regarding a past sensation as a sign of a certain present physical event ?" The answer is that I must assume that both sensations are manifestations of states of a persistent something with permanent powers of producing certain kinds of sensation. I must assume, *e.g.*, that my present cold sensation is an appearance of something which not only *does* feel cold now, but which also *would have* felt cold when I was having my white visual sensation if I had then been touching it instead of seeing it. Or I must assume that my past white sensation was an appearance of something which not only *did* look white then, but which *would still* look white now if I were seeing it instead of touching it. I have not the least idea whether this argument would have been accepted

by Kant as what he meant. But it has the merit of being intelligible and of starting from Kant's premises and reaching something like his conclusion. I will now make some comments on it.

(a) The premise that all our sensations are purely successive is plainly false. But it remains true that we do very often claim to perceive *contemporary* events by means of sensations which are *successive*; and the argument can be applied to such cases. I very much doubt, however, whether we could have formed the notion of physical co-existence at all unless we had met with instances of co-existence among *sensa*. It is perfectly true that we do now often regard contemporary sensations as appearances of successive events and successive sensations as appearances of contemporary events. And I think it is true that we do use the notions of Cause and of Substance when we do this; or, at any rate, that we should have to use arguments which involve these concepts if we were called upon to justify our procedure. But we surely should not have formed the concept of Simultaneity at all, with or without the help of Cause and Substance, if from the very first we had been acquainted with nothing but what is successive. (b) Although the argument proves something, it does not prove anything like as much as Kant claims to have proved.—*e.g.*, it has not the faintest tendency to prove that no empirical substances can begin or cease to exist in the course of nature. If I am to regard two successive sensations as appearances of two contemporary events, and if I am to justify myself by this argument, I must indeed assume the existence of an empirical substance which lasts at least as long as the interval between these two sensations. But, so far as this argument is concerned, it might have begun to exist just before the first sensation and it might cease to exist just after the second sensation.

Second Argument.—This begins in the fourth line from the bottom of p. 149 in *Max Müller* and goes on to the end of the

first paragraph of p. 150. It is repeated in the Second Edition, and will be found in *Suppl. XVIII*, p. 773, of *Max Müller*. Kant's statement is, as usual, very difficult to follow; but there is no doubt that this argument differs entirely from the one that we have already considered. I will follow what seems to me to be probably the argument of the Second Edition.

Kant starts by saying that "all phenomena exist in time; and in it alone as the substratum can *simultaneousness* as well as *succession* be represented." (Kant's italics.) I take him to be asserting that when we call two events "simultaneous" we *mean* that they occupy the same moment of Absolute Time, and that when we call two events "successive" we *mean* that they occupy different moments of Absolute Time. His next step is to assert that "Time by itself cannot be perceived." This means, I think, that we cannot perceive moments of Absolute Time, but only events. It follows at once that the *definition* of "simultaneity" and of "succession" cannot be the *criterion* by which we discover whether a given pair of events are simultaneous or successive. This leads to the last step. Since we certainly do manage to judge that certain pairs of events are simultaneous and that other pairs are successive, there must, he says, "exist in objects of perception a substratum which represents time in general, and in which all change or simultaneousness can be perceived through the relations of phenomena to it." I think that this simply means that we must take some perceptible process as uniform, and represent the successive moments of Absolute Time by successive phases of this process. We can then date all other events by considering their temporal relations to the phases of this standard process. If two events be simultaneous with the same phase of the process they are counted as simultaneous with each other. If they be respectively simultaneous with different phases of this process they are counted as succeeding each other. I suppose that Kant thought of this

standard process as the uniform movement of some permanent perceptible body such as a pendulum or a planet. This is probably the reason why he insists that time must be represented by something permanent in phenomena. But, even if this be necessary, it is obviously not sufficient. This permanent something must not be *merely* permanent, or it could not possibly represent time. What is needed is that there shall be a perceptibly uniform process of change—*c.g.*, a regular rotation or vibration, which continually repeats itself. Now uniformity is primarily a permanence not of substance but of the characteristics of a process of change. A permanent substance is needed only in so far as a permanent mode of change requires a permanent substance. So Kant seems to have put his emphasis in the wrong place.

Even so, I certainly cannot admit that this argument could prove anything like as much as Kant claims to have proved. The most that it could prove is that, if all events are to be dated in a single time-series, there must always be *some* perceptible process *or other* which is perceptibly uniform and can be taken as a standard. But it need not always be the *same* process or be going on in the *same* substance. Every individual clock began and will cease to exist, and every clock sometimes stops. But, provided that there are always some clocks going, and that the new ones that are made can be regulated by the old ones before these stop or are broken, we could always date events in a single time-series. Kant seems to think that this would be impossible unless there were some one clock which is always going. But all that is really necessary is that there shall always be some clock or other which is going. He has therefore not proved that there need be even a *single* empirical substance which never began and will never cease in the course of nature. Still less has he proved that *every* empirical event must be regarded as a state of such a substance.

Moreover, it seems to me that the principles which are involved in the second argument are inconsistent with one of the premises of the first argument. And, since both arguments are supposed to prove the same conclusion, this is unfortunate. When we date an event by reference to the phases of some standard process, such as the positions of the hands of a clock, this always involves immediate recognition of the fact that two *sensa* are simultaneous. *E.g.*, if we want to date a certain flash, we have to be immediately aware of the simultaneity of this sensation with the sensation which manifests to us the momentary position of the hands of the clock. Unless different sensations could be, and could be immediately recognised to be, simultaneous with each other, it would be impossible to date other events by reference to the phases of a perceptible standard process. But one premise of Kant's first argument is that all sensations as such are intrinsically *successive*.

Conclusion.—It seems to me obvious that Kant has not proved the conclusion which he set out to prove. I understand this to be that ordinary every-day experience would be impossible unless all perceptible events could be regarded as states of perceptible substances which can neither begin nor cease to exist in the course of nature. And it seems to me almost equally clear that this conclusion is in fact false. Ordinary experience would go on very much as it does now if old substances occasionally ceased to exist, and new substances occasionally began to exist, and there were a certain number of "wild" events which could not be assigned to empirical substances at all. It is all a matter of degree. If such shocks happened too often ordinary experience would cease to be possible. No doubt scientists do assume that the ultimate substances, whatever they may be, neither begin nor cease to exist in the course of nature; and that all physical changes are, or are correlated with, re-arrangements of these ultimate substances and changes in their modes of motion.

And it is arguable that, without this assumption, the strength of their beliefs in particular natural laws "established by induction" would be incapable of justification. Kant hoped to prove that certain very fundamental and characteristic features of ordinary experience could not be explained unless these very rigid assumptions of science were fulfilled. If this could have been proved, it would have been a very important result. But Kant has certainly not proved it, and it is almost certainly untrue.

SECOND ANALOGY.—There appear to me to be three fundamentally different lines of argument by which Kant tries to prove the Second Analogy. The enunciation of the Analogy is slightly different in the two editions of the *Critique*, but I think that the difference is only verbal. I think that the Analogy may fairly be stated in the following form: "Every perceptible event must be regarded as causally determined by some earlier perceptible event in accordance with some general law." We will now consider the three proofs.

First Argument.—This is to be found in *Max Müller*, p. 155, to the end of para. 1 on p. 162. As in the first proof of the First Analogy Kant starts with the *assumption* that all sensations are intrinsically successive, and with the *fact* that we nevertheless sometimes base upon them judgments of co-existence and sometimes judgments of succession. He takes two examples to illustrate this fact: (a) Suppose I look at any large object, such as a house, from such a distance that I cannot get it all into my field of view at once. Then perhaps I first look at the roof and then cast my eye down it till I come to the basement. Or I first look at the left side of it and then carry my eye along till I come to the right side of it. Or, again, I might walk round it, so as to see the sides and the back. Here my sensations are certainly successive. When I am seeing the roof I have not yet seen the basement, and when I am seeing the basement I have ceased to see the roof. Yet I believe that the roof and the base-

ment, the right side and the left side, the back and the front, are all co-existing parts of a single physical thing. (b) Suppose I look at a boat going down a river. My sensations are again successive. But now I judge that I am perceiving a series of successive events, and not simply seeing successively a number of parts which are themselves co-existent. The facts which Kant here illustrates are certainly quite genuine. And it is certainly true that no one who could not draw this distinction between the order in which we happen to get our sensations and the order in which perceptible things and events exist in nature would have an experience in the least like ours. Kant's problem is: "How do we come to be able to make such distinctions, and what is implied in the fact that we can make them?" This is evidently a genuine and important problem; and, so far as I know, Kant was the first person to raise it.

Now Kant points out that there is a fundamental difficulty at the outset. I am acquainted with nothing but my own sensations, and these are intrinsically successive. The very fact that I draw a distinction between the order in which I happen to get my sensations and the order which exists in perceived objects implies that I regard my sensations as signs of something other than themselves. But what can this "something other" be, and how can I know anything about it? Kant says that the notion of Transcendental Objects or Things-in-themselves is here irrelevant, even if it be in fact true that our sensations are caused by such Objects. When a person who casts his eye over a house says that he is perceiving a whole of co-existing parts by means of a series of successive sensations, he is not talking about Things-in-themselves in Kant's sense of that term. We do not know whether Things-in-themselves have parts at all, or whether there would be any sense in supposing that their parts are co-existent. The objects of which our sensations are signs must then differ from the sensations themselves and yet cannot be

Things-in-themselves. What then can they be? Kant's answer on p. 156 seems to be as follows: The empirical object of which a certain sensation is a sign is a whole set of actual and possible sensations connected in accordance with a rule. "What is contained in our successive apprehension is considered as presentation; and the given phenomenon (though it is nothing but the whole of these presentations) is considered as their object. It is with this that my concept, which is drawn from my presentations, has to accord" (p. 156, *line 19 et seq.*). Again: "The phenomenon, in contradistinction to our presentations of it, can be regarded as an object different from them only if it is subject to a rule which makes a certain kind of combination of the manifold necessary" (p. 156, *line 30 et seq.*). This view of empirical objects seems almost identical with Russell's, except that Kant regards *sensa* as mental or mind-dependent, whilst Russell does not. So the concept of a house is the concept of a certain group of actual and possible sensations subject to a certain characteristic rule of connexion. And any sensation belonging to this group will be a presentation of the house or of some part of it.

Having settled what is meant by an "empirical object," Kant now considers the conditions which determine whether a series of successive sensations shall be treated as a sign of a series of successive physical events or as a sign of a set of co-existing parts of an empirical object. Here there are two distinct points to be considered: (a) What is in fact our criterion for objective co-existence and objective succession? And (b) What is implied by this criterion?

(a) In the case of the house, it would have been possible for me to have reversed the order in which I got my sensations without handling the perceived object. Actually the appearance of the roof preceded the appearance of the basement. But, if I had there and then looked in a different direction and cast my eyes upwards instead of downwards, the appearance of the base-

ment would have preceded that of the roof. In the case of the boat floating down the stream nothing that I could have done, short of actually handling and dragging the boat upstream, would have enabled the appearance of its lower position to precede that of its upper position. Put in general terms Kant's criterion may be stated as follows : Suppose that sensation *a* has in fact preceded sensation *b*. Then, if I believe that without doing anything to the perceived object I could have made sensation *b* precede sensation *a*, I hold that the successive sensations are signs of simultaneous events or parts of an object. If I believe that nothing that I could have done short of interfering with the perceived object itself could have made sensation *b* precede sensation *a*, I hold that *a* is a sign of an event which objectively precedes the event of which *b* is a sign.

I will now make two explanatory comments on this criterion : (1) Kant does not suggest that in one case the actual order of the sensations is undetermined and that in the other it is determined. He holds that it is determined in both cases. The difference is simply in the mode of its determination. In one case it is determined *by* me, and would have been different if I had chosen to do different things with my body at the time. In the other case it is determined *for* me or *imposed on* me, and nothing that I could have done with my body at the time would have made it different. (2) Kant does not explain why I believe in one case that I could have altered the order of the sensations without interfering with the perceived object, whilst in the other case I believe that I could not. But it is fairly easy to state the grounds for these beliefs. In the case of the house I find that, after having the series *a-b*, I can at will get a series *b'-a'* in which *b'* is exactly like *b* and *a'* is exactly like *a*. I find that I *can* do this as often as I like ; and so I argue that I *could have* had the sensations *a* and *b* themselves in the order *b-a*, though I actually had them in the order *a-b*.

The next question is whether this criterion is either necessary or sufficient. I think that it certainly is not sufficient. (1) Suppose that at the same place two physical events happened simultaneously, one of which appeared as a flash and the other as a noise. Then whatever I did with my body the flash would precede the noise. I should therefore hold, on Kant's criterion, that the event which appears as the flash objectively precedes the event which appears as the noise. And I should be wrong. So the criterion is plainly insufficient. (2) Suppose, again, that a physical event which appears as a noise takes place at a point P at a time t_P . And let another physical event which appears as a noise take place at a different point Q at a later moment t_Q . Then, provided that the distance PQ is greater than $v(t_Q - t_P)$, where v is the velocity of sound in air, I could make the P-noise earlier than, simultaneous with, or later than the Q-noise merely by moving about to suitable situations. Suppose that P and Q were each sending out a series of sounds at the same regular interval, and that I started by standing in such a position that the P-noises and the Q-noises were simultaneous. Then I should find that if I move in one direction the sensations happen in the order $p-q$, and if I move in another direction the sensations happen in the order $q-p$. I ought to conclude on Kant's criterion that each P-event is simultaneous with a Q-event. But I shall be wrong if I do so. Hence the criterion cannot be sufficient. We may conclude that Kant's criterion of objective sequence or co-existence is undoubtedly useful if checked by other criteria but is certainly not sufficient by itself. A complete account of the subject involves very great difficulties, and would lead us on to the Theory of Relativity. We cannot blame Kant for not having anticipated Einstein; but we can regret that he took no account of the quite elementary difficulties which I have just pointed out.

(b) We now come to the final step of Kant's argument. It seems to me that Kant may have intended to assert either of two very different propositions about causation. I shall therefore state them both, and consider whether either is true. The common supposition of both propositions is that on a certain occasion I have two sensations a and b in the order $a-b$, that a is a manifestation of the physical event α , and that b is a manifestation of the physical event β . The two propositions may then be stated as follows: (1) If I could not have had the sensations a and b in the order $b-a$, then the physical event β must have been causally determined by some physical event α' which was contemporary with α . (α' may happen to be identical with α , but it need not, and in general will not, be identical with α .) The other proposition is this: (2) If I have any ground for believing that I could not have had the sensations a and b in the order $b-a$, then part of my ground for this belief must be the belief that the physical event β was causally determined by some physical event α' which was contemporary with α . It is evident that these two propositions are quite different. We will now consider them in turn.

(1) The first proposition is certainly false. Suppose that β were an entirely uncaused event, and that α objectively precedes it. β , whether caused or uncaused, cannot manifest itself before it has happened. On the other hand, α may manifest itself before β has happened. In that case it is impossible that the sensation b should have preceded the sensation a . Hence the fact that the order $a-b$ of the sensations could not have been reversed does not imply that β must have been caused by something contemporary with α . For this irreversibility could exist even if β were completely uncaused. Let us take another instance. Suppose that α and β were two events which happened at the same place, and which both manifest themselves by noises. Suppose further that α objectively precedes β . Then, even though β

were completely uncaused, the sensation *b* could not have preceded the sensation *a* no matter how I might have adjusted or placed my body at the time. You may say that this example assumes a particular causal law, since it assumes that all sound-disturbances travel with the same velocity. This is true, but irrelevant. The causation here involved is between the physical events and the sensations, whilst Kant is professing to prove that the second *physical event* must have been caused by some physical event which is contemporary with the first. If then Kant did mean to assert the first of the two alternative propositions, he simply made a gross mistake.

(2) The second proposition is a good deal more plausible. In order to discuss it we must first ask : " Under what circumstances should I judge that I could not have had the sensations *a* and *b* in the order *b-a* instead of the order *a-b* whatever I might have done with my body at the time ? " The answer seems to be as follows : I should make this judgment under two conditions. (i) It may be that I have often had sensations like *a* and sensations like *b*, and that my body has been *differently* adjusted on each occasion, and yet the sensations have *always* happened in the order *a-b* and never in the order *b-a*. Or (ii) it may be that I have often had sensations like *a* and sensations like *b*, and that they have sometimes happened in the order *a-b* and sometimes in the order *b-a*. But my body has been adjusted *in exactly the same way* on occasions when the sensations have happened in the order *a b* and on occasions when they have happened in the order *b-a*. (An instance of the first case is provided by lightning and thunder. An instance of the second kind would be provided by watching railway trains, some of which pass me on the up-line and some on the down-line.)

We have now only to consider what is involved in inferring from such facts as these that I could not have had the particular pair of sensations *a* and *b* in the opposite order to that in which

they in fact happened. I can infer immediately from these facts that the particular adjustments of my body at the time when I have a pair of *a*-like and *b*-like sensations are probably causally irrelevant to the order in which such sensations happen. And from this I can infer that in all probability nothing that I might have done with my body on the particular occasion when I had the sensations *a* and *b* would have altered their order.

Now of course this argument does involve the notion of causation. But, so far as I can see, it involves it only negatively. The fundamental proposition assumed by the argument is the following: "Lack of concomitant variation between two factors throughout a *series of instances* is a sign of causal irrelevance between these two factors in *each instance*." It does not involve the assumption that the factor which varies while the other keeps constant, or keeps constant while the other varies is *itself*, causally determined at all. Of course I am quite ready to admit that when condition (i) is fulfilled we should *in fact* suspect a direct or indirect causal connexion between *a*-sensations and *b*-sensations. We should suspect that *a*-sensations intrinsically determine the occurrence of *b*-sensations, or that *a*-sensations are determined by physical events of the α -kind which intrinsically determine physical events of the β -kind, which in turn determine *b*-sensations. Again, when condition (ii) is fulfilled we should *in fact* be inclined to suspect that there are variable factors *a'* and *b'*, such that *aa'*-sensations directly or indirectly determine *b*-sensations, whilst *bb'*-sensations directly or indirectly determine *a*-sensations. But these are just *other* inferences which may be made on *other* principles from the same facts. They are not involved in inferring from these facts that the order of the particular sensations *a* and *b* could not have been reversed by anything that I could have done at the time. So, if Kant meant to assert the proposition (2) it seems to me that he was mistaken. The utmost that he is entitled to say is that the facts from which

people commonly infer that a certain event objectively succeeded a certain other event are the same facts from which they commonly infer that the second event was causally determined by something contemporary with the first event. But, since they use a negative and relatively indeterminate premise about causation in making the former inference and a positive and relatively determinate premise about causation in making the latter inference, we are not entitled to say that the former inference can never be justifiable unless the latter is so too.

Second Argument.—This is to be found in *Max Müller*, p. 164, para. 2, to p. 165, end of para. 2, and also in *Supplement XIX*, p. 774–775. It takes as its premise the fact that I can *perceive* or *remember* that a certain change took place in the order $a-b$ and not in the order $b-a$, whilst I can *imagine* it equally well as taking place in either order. Kant rather mixes up the two cases of remembered and of perceived change. I propose to treat them separately, beginning with remembered change.

(a) Suppose I remember that a changed to b . It may quite well happen that the image of b arises in my mind before the image of a . So I am able to distinguish between the order in which my memory images happen to arise and the order in which I believe the remembered events to have happened. Again, no matter in what order the images happen to arise I can always think of b preceding a , although I believe that a in fact preceded b . Somehow then I manage to distinguish between a merely imaginary and a real order of events. I think that these must be the facts that Kant is referring to in the following passages: "The series of successive presentations may be taken as retrogressive as well as progressive" (p. 164, para. 2). Again, "Imagination can connect these two states in two ways, so that either precedes the other in time" (p. 775, top). What do such facts involve?

Kant first makes a negative statement. I cannot reach the distinction by means of the moments of time themselves at which

the events happened. For, he says: "Time cannot be perceived by itself, nor can we determine in the object, empirically and with reference to time, what precedes and what follows" (p. 775, *line 3, et seq.*). He then makes his positive assertion. The only possible ground that I can have for believing that *b* objectively followed *a* is that I believe *b* to have been causally determined by something contemporary with *a*. Kant gives no ground for this assertion. The mere fact that we do not draw the distinction in one way is no reason for holding that we do draw it in a certain other way. I shall now try to show that the way in which Kant suggests that we draw the distinction could not suffice to account for the facts, and that there are other criteria which Kant has omitted.

(1) Kant denies that we can discover that *b* objectively follows *a* by appealing to the moments of time which they occupy, on the perfectly reasonable ground that moments of time are not perceptible. But his own criterion is open to precisely the same objection. The characteristic of "being causally determined by something contemporary with *a*" is obviously not a *perceptible* characteristic of the event *b*. No doubt if we accept the Law of Causation we do know of every event (and therefore of the event *b*) that it has the characteristic of "being causally determined by some event which precedes itself." But, unless we already knew on other grounds that *a* preceded *b*, we could not infer from the fact that *b* has the characteristic of "being causally determined by *some* event that precedes *b*" that it has the more determinate characteristic of "being causally determined by some event which is contemporary with *a*." So Kant's criterion, taken by itself, is as useless as the appeal to moments of time which he has rightly rejected.

(2) All that Kant has really established is two negative facts: (i) that it is useless to appeal to the moments of time, since these are imperceptible; and (ii) that it is useless to

appeal to the order in which the images of *a* and *b* happen to occur, since it is admitted that the image of *b* may precede the image of *a* when I firmly believe that *a* preceded *b*. But these facts leave many other possibilities open—*e.g.*, the images might have certain perceptible characteristics, such as degree of liveliness, amount of detail, and so on. I might regard a livelier and more detailed image as in general representing a later event than a fainter and less detailed image. There are almost certainly many signs which we use to judge the objective order of remembered events. Probably none of them by itself is sufficient; and undoubtedly we do in certain cases use a causal criterion among others, after we have established to our satisfaction certain particular causal laws—*e.g.*, if I find that an historian mentions a certain event I conclude on casual grounds that the event objectively preceded his record of it. All that I wish to maintain against Kant is (i) that the general law that every event is causally determined by some earlier event is quite useless for fixing the relative dates of two determinate events *a* and *b*, and (ii) that particular causal laws could not possibly be our *only* or our *original* criterion for dating events in an objective order. For no single law of this kind could have been established unless we had other grounds for dating events, since our only empirical evidence for holding that *x* causes *y* is the observed fact that events of the *x*-kind have always been followed in our experience by events of the *y*-kind.

(b) We need now say very little about the case of *perceiving* a change *a-b* and contrasting it with an *imagined* change *b-a*. (1) Kant altogether ignores the vitally important fact that there are sensations of change as well as changes of sensation. It is only when I have sensations of change as well as changes of sensation that I can strictly be said to *perceive a change*. Otherwise I can only be said to *perceive that something has changed*. When I look at the second-hand of a watch or at a flickering

flame my *sensa* have a peculiar determinable quality which is just as characteristic and just as sensible as colour or temperature. This determinable quality has various determinate forms, just as colour has. If the second-hand of my watch had jumped backward instead of jumping forward while I was looking at it, the determinate form of the determinable sensible quality of movement would have been as obviously different as red is from blue. To say that the perceived change took place in the direction $a-b$, whilst I can imagine it taking place in the direction $b-a$, means simply that my visual *sensa* have a certain determinate form of the sensible quality of motion, whilst I can conceive that they might have had a different determinate form of the same determinable quality. It is surely obvious that this does not involve the belief that b is caused by something which is contemporary with a .

(2) In order that I may perceive *that* there has been a change from a to b without perceiving *the change* from a to b , the following conditions seem to be necessary and sufficient: (i) I perceive b and I perceive something (which may be b itself) which is inconsistent with the existence of a now. (ii) I remember a and I remember something (which may be a itself) which is inconsistent with the existence of b then. Now it is certain that the distinction between remembering and perceiving, and the distinction between remembering and expecting or merely imagining, cannot depend on making judgments which involve causation. It is true that we now often *test* particular memory-judgments by criteria which involve particular causal laws; but no causal law could have been established unless we had already accepted a great many memory-judgments at their face-value and without appeal to causation, and had distinguished them already from mere imaginations or expectations. Perhaps it will be said that causal judgments are involved in judging that the present existence of a is inconsistent with something that I now perceive

and that the past existence of b is inconsistent with something that I now remember. Certainly *if* I remember something contemporary with a which I believe to be the cause of b , I shall judge that b could not have existed then. But (i) this criterion of inconsistency presupposes that certain particular casual laws have already been established; and (ii) it is not the only available criterion of inconsistency. If I perceive that x is now in a certain place and I remember that it was in a different place, I know, without any appeal to causation, that it must have changed its place. Such a judgment does no doubt involve the category of substance, and it does involve the recognition that I am dealing with the same substance on both occasions; but it does not appear to involve the category of Cause, and it certainly does not involve any judgment about the causation of the perceived present event by something contemporary with the remembered past event. It seems to me, then, that Kant's second argument is a complete failure.

Third Argument.—This is utterly different from the other two, but it may be compared with the second argument for the First Analogy. It is to be found in *Mar Müller*, p. 162, para. 2, to p. 164, end of para. 1. The argument seems to be as follows: Consider any pair of events a and b , of which a in fact precedes b . Then we should all admit that, although a in fact precedes b , it is *logically* possible that b should have preceded a . Now consider two moments of time t_a and t_b , of which t_a in fact precedes t_b . We should hold that if t_a in fact precedes t_b , it is *logically* impossible that t_b should have preceded t_a . We are convinced that no pair of moments could have stood in any different relation to each other from that in which they actually do stand. Now the question is: "How do we come to know this fact about moments of time, seeing that they are imperceptible?" Kant answers that we can know this fact about the series of *moments* only because it is represented by a certain property

of the series of *events*. Suppose that every event is causally determined by some earlier event. Then if *b* in fact follows *a* it is *causally* impossible that *b* should not have followed *a*; for *b* is a causally necessary consequence either of *a* itself or of something contemporary with *a*. To put it generally: "If all events be causally determined by earlier events, and we take any momentary total state of affairs as a datum, then it is causally impossible that any of the subsequent states of affairs should have been different from what they in fact are." Kant's argument seems to be that it is only by recognising the *causal* necessity of the actual order of perceptible *events* that we can know the *logical* necessity of the actual order of *moments*. And, since we do recognise the latter, we must recognise the former.

There are two remarks to be made on this argument: (1) Even if we accepted it, it would prove only that we *believe* that every perceptible event is causally determined by some earlier perceptible event. It would not prove that the belief is *true*; and Hume himself would have been quite prepared to admit the existence of the belief. (2) The argument is unsound. We can explain why we believe that two moments *must* stand in the relations in which they do in fact stand without any appeal to the Law of Causation. This I will now show.

When I distinguish between events in time and moments of time, what exactly do I mean? I regard an event as a particular which has some other characteristic beside its determinate temporal position—*e.g.*, it may be a flash of a certain determinate colour and intensity in a certain determinate place. I regard a moment as a particular which has *no* other characteristics except a determinate temporal position and any temporal relations which may be entailed by this. When I say that, although the event *a* in fact preceded the event *b*, it is logically possible that *b* should have preceded *a*, what do I mean? I mean simply that an event which was in all other respects exactly

like b might have had the temporal position which a has, and that an event which was in all other respects exactly like a might have had the temporal position that b has. This is the only sense in which it is logically possible that b should have preceded a , though a in fact precedes b . But in this sense it is plainly impossible that two *moments* should have stood in any other relations than those in which they do in fact stand. For, by definition, a "moment" is something which has no quality but a certain determinate temporal position. Hence any moment which had a different temporal position from t_a would by definition be a different moment from t_a : and similar remarks apply to t_b . It is therefore a purely analytic proposition that two moments could not have stood in any different relations from those in which they do in fact stand. And we do not need to appeal to events and their causation in order to recognise the truth of a purely analytic proposition about moments. So Kant's third argument fails like the other two.

General Conclusion.—Kant may be congratulated on having seen the importance of the question: "How do we date events in a single neutral time-order, and distinguish between the order in which we happen to get our sensations and the order in which the events that we perceive by these sensations happen?" He may be congratulated on seeing that the notions of Substance and Causation are involved in all attempts to carry out this task completely. But this is as far as we can go. His detailed arguments are obscure and confused to the last degree; and when we try to disentangle them we find that they are utterly incompetent to prove his detailed conclusions.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W.C.1, on May 3rd, 1926, at 8 p.m.*

XII.—OBJECTIVITY IN SCIENCE.

By A. E. HEATH.

I.

I MUST confess, at the outset of this short paper, to a doubt whether philosophers ever seriously question the objectivity of science in any deeper sense than they question the objectivity of perception : and this for a very real reason if Santayana's view be the true one ; namely, that science is " nothing but developed perception, interpreted intent, common-sense rounded out and minutely articulated."* It is true that for generations the fashionable philosophies of science have been sceptical : but none of their creators have behaved as though they believed their doubts to be solidly founded. There is a peculiar cold feel about the first-handedness of the thing itself which makes all " theories about " science seem woolly. They have the kind of improper ornateness which comes from an unreal and artificial sophistication. It is as though one had gone further and fared worse. Perhaps it all comes down, ultimately, to a matter of style. It is a truism to say that in literature a certain dry austerity may be a more powerful and more subtle descriptive weapon than a rich luxuriance. And something of the same difference in atmosphere is, I think, observable in passing from the work of men of science themselves to that of writers on the meaning of science. The inspired simplicity of a Chekhov, like the fresh directness of a Newton or an Einstein, may leave its roots in the same soil. Mr. J. B. Priestley has recently described the method of Chekhov

* G. Santayana, *The Life of Reason : Reason in Science*, p. 307.

in the following words: "Being a man of his time . . . what he is really interested in are not actions but states of mind. But he does not make it his business, as do most representative modern writers, to describe states of mind. He describes, as shortly as possible . . . actual incident, action, and dialogue, and from them we infer what his people are feeling."* In other words, the solidity he attains in suggesting subtle mental characteristics is achieved by direct treatment of bare fact. So too, in general, the complexity and beauty of man and his world are more likely to be conveyed by concentration on the immediate than by romantic elaboration. Miss Rebecca West, in one of her novels, seems to have sensed something of what I am trying to express. "It is a curious thing," she says, "that if you think and talk about the spirit you only look into the mind of man, but if you cut out the spirit and study matter you look straight into the mind of God."† A materialism, I would emphatically urge, is not necessarily implied in this view. What is, rather, suggested is that anthropomorphism is death to recognition of the true character and intricacy of the real. It is precisely this avoidance of anthropocentric views which gives to science its range and power. And it is because I believe that the importance of this factor has not been sufficiently emphasized in recent work that I offer this note on the subject.

II.

The place of the "impersonal" view in the development of a rational scientific procedure can best be brought out by exhibiting science as a growth related in definite fashion to earlier modes. In his book on *Scientific Method*, Mr. A. D. Ritchie spoke of

* J. B. Priestley, *Saturday Review*, 1925, Vol. 140, p. 446.

† *The Judge*, p. 337.

science as "the process of exploring the external world." This definition is, however, too wide. It does not exclude the mere accumulation of dead lumber. Science must be viewed as a particular kind of exploration, fashioned slowly to its present form through the ages. It is a characteristic mode of approach to the study of any field of human experience, and consists essentially of two steps whose alternations are comparable to the placing of first one and then the other foot forward in walking. These steps are (1) the observing and testing of a body of facts, and (2) the "ordering" or systematizing of those facts, by the discovery or creation of appropriate conceptions and hypotheses, into general and easily grasped truths. Knowledge of a chaotic body of facts does not constitute a science. To step (1) has to be added step (2). The body of fact has to be, in Professor Nunn's phrase, "rendered intelligible." Moreover, this double process is never finished; for the ordering of any field always directs attention back to a closer examination of the body of fact concerned. Theories constructed to co-ordinate facts lead to the discovery of new groups of fact; these, in turn, are susceptible of further ordering, and so on in an endless series. It should be noted that both steps are essential. In certain periods the need for constant critical and first-hand observation was overlooked, and science degenerated into system building; in other ages there have not been wanting those who regarded empirical and experimental processes as the sole requirement in scientific work—a denial of man's most valuable possession, the power of imaginative reason. For healthy scientific development a proper balance between the two factors must be maintained.

With these considerations in mind we can now take what must, of course, be a very fleeting and simplified survey of scientific procedure as it emerges from earlier modes. In broad outline we may say that in Greek science at its best the balance between the two steps was already won in certain

domains. The first victory was in the field of spatial experience ; and the importance for thought of the step from the empirical results of Egyptian mathematicians to the general theories of Greek geometers cannot be over-estimated. Greek geometry not only developed the logical machinery necessary for the scientific mode of approach to the world of external physical nature, but also fostered the objectivity of outlook essential to that approach. Especially in those domains of nature where deductive processes play an important part, the emergence of a balanced "scientific" treatment became possible. This balance was lost again in succeeding ages in which, for complex reasons, there is a failure to value step (1). Much mediaeval scientific work may be regarded as coming under this description. It should not be forgotten, however, that such work often served a real function in co-ordinating known facts and views. Thus Dr. Singer, in his account of "The Scientific Views and Visions of Saint Hildegarde, 1098-1180,"* speaks of the use of the supposed relations between the macrocosm and the microcosm as a co-ordinating conception in which her theological and physiological knowledge, together with her notions of the working of the human mind and of the structure of the universe, are all synthetized. "The scheme, though complex and difficult, is neither incoherent nor insane. . . . If at times it passed into folly and fantasy, it should be remembered that it also fulfilled a high purpose. It gave a meaning to the facts of nature." Indeed, Prof. Whitehead, in his latest book,† suggests that Galileo and the founders of modern science must, in their reaction from the "reasoned meanings" of their predecessors, be regarded as anti-rationalists conscious of the need to break clear of co-ordinating systems and contemplate "irreducible and stubborn facts." It is clear that the lack of stress, in early

* *Studies in the History and Method of Science*, Vol. 1.

† *Science and the Modern World*.

mediaeval science, on the first of our double steps represents a definite falling away from the "direct, detached, objective temper" which has been spoken of as the generative principle of the whole Greek achievement for civilization. In short, it was a regression to a more primitive form of treatment, and only a little way separates it from an earlier form still—animistic magic. Magic, like mediaeval science, is too personal. Men read themselves, their feelings, and their desires into their explanations of the world. Animistic interpretation, however, like anthropomorphic ones, may still perform a true co-ordinating function. But there is this important further character of magic : it is developed in a much less conscious and deliberate way. The origin of sympathetic magic, for instance, does not appear to be intellectual illusion. The view which seems to be gaining ground is that the first element is the immediate discharge of longing in action. If the savage wants rain he "acts" rain by croaking as he has heard frogs croak when it rains. These acts stiffen into ritual, on this view ; and beliefs in the efficacy of similarities follows later. Magical beliefs and practices are not, then, mere unorganised collections of baseless superstitions, any more than mediaeval science is altogether incoherent and insane. Both are primitive forms of approach to the world of nature ; and they differ from the form characteristic of science in lacking, respectively, the qualities of being reflective and impersonal. So long as these embryonic modes of treatment of nature were the product of unreflective acts they could only take the stiff and self-central form of magical beliefs, corresponding to the social organization which Bagehot called the "cake of custom" of primitive societies. In some marvellous way we find, in ancient Greece, that the break-up of the cake of custom has been suddenly effected. Man's outlook on the world is not only deliberate and conscious ; it is also objective. The loss of objectivity in later times was not, however, a complete regres-

sion to magic ; for though mediaeval astrology was primarily concerned with human hopes and fears, and only secondarily with the stars, yet its vision did reach to the stars. Nevertheless the lack of appreciation of step (1) made even the newly-gained knowledge of Greek scientific results sterile for centuries. The re-discovery of what Roger Bacon called *scientia experimentalis* was needed to revive the balanced temper essential to science. The growth of this can be traced through transitional figures like Kepler to its full fruition in Galileo.

III.

It is important to notice that scientific procedure viewed in this way as a particular mode of approach to the study of any subject was, through many vicissitudes, first attained in its complete form by man in the realm of mathematics and external physical nature. The seventeenth century saw it applied to the complete domain concerned with the study of the rest and motion of material bodies ; it was the age of mechanics. Succeeding centuries brought its extension to even wider fields of human endeavour : to various physical forces in Nature, and to the field of chemical fact, in the eighteenth century ; to the domain of biology in the nineteenth. And in our own time there is the attempt to apply it to the realm of mind and to the products of mind, including social institutions. The order of application is important because it brings out the pregnant fact that the series brings us ever nearer to man's inner nature. The reflective impersonality necessary for scientific treatment was won first, naturally, in regions furthest removed from his personal interests and desires. Extensions into regions nearer home to his hopes and fears have had to be achieved by hard struggle, and each has been hailed at first as blasphemous or indecent intrusions into domains not susceptible of scientific treatment. M. Bergson once tried to conceive what would have been the effect on the

world of knowledge if the sciences of mind had been developed before those of physical nature. But the thing is impossible. It was only by easy stages that man could win through to the "ethical neutrality" needed for that stepping aside from the anthropocentric position without which a science is unattainable.

This is the heart of my contention that the character of impersonality is an essential to science, and indeed to all knowledge. I hold, too, that it is just as necessary in the sciences which deal with man himself as in those dealing with physical nature. On this point I imagine I differ from Prof. G. C. Field. I find myself in agreement with most of what he had to say in the admirable paper he recently read to this Society.* I can follow him in believing that the background of "ideals of explanation" which were sufficient for the progress of the physical sciences may be inadequate for other branches of knowledge. But at the same time I feel that these ideals of explanation vary in character in each autonomous branch of science; that, in other words, it would be nothing strange if psychology needed a philosophical background different from that of physics. On the other hand, it seems to me that this would not necessarily destroy its character as a science. What would do that would be the presence of serious anthropomorphic elements in that background. On all questions, whether physical or mental, where his passions are roused, man is too anxious to be certain to have time to know. And it is probably that, rather than the absence of a body of suitable ideals of explanation, which delays the science of psychology. Mr. J. W. N. Sullivan has put the case in his usual racy way. "Psychology is the latest of the sciences," he says, "not so much because of the difficulty of its subject-matter as because our interest in the subject-matter is so vehement that it is almost

* "Ancient Philosophy and Modern Science," pp. 117-134.

impossible to be indifferent to the results. An intelligent fish would probably have found most of the painfully-won results of human psychology fairly obvious.”*

IV.

A critic might well ask at this stage, whether the very presence of “ideals of explanation” does not vitiate the de-humanised character of a science at its source. Prof. Leonard Russell suggests this possibility in the paper in which he develops the notion of wide and pervasive types of generalization which guide the investigator and which are so much more challenging than preliminary hypotheses that he calls them “demands.”† Human nature, is part, of the nature of things, he says. But the fundamental thing is not, on this view, the projection of man’s nature into the nature of things; “it is the way in which man enters into nature, through his various activities, by making such demands as his nature constrains him to make.” Professor Russell, however, does not take so anthropocentric a stand as these quotations would suggest. For he answers, in some degree, his own difficulty: man, he says, must submit his “demands” to the discipline their working out involves. That is to say, the demands which form the background of guiding ideas in the establishment of the broad framework of a science must, like the more restricted hypotheses of the science, be brought ultimately to the test of fact. There is always an objective reference back to the field of “primary fact” (to use Prof. Nunn’s useful term) in which all these growths have their roots. The initial form of a hypothesis or of a demand may be anthropomorphic, but it would be committing the genetic error of supposing that the origin of a thing determines its ultimate nature, if we assumed that its

* J. W. N. Sullivan, *Aspects of Science*, p. 11.

† *Proceedings of the Aristotelian Society*, N S. Vol. xxv, 1924-25, pp. 61-76.

final character necessarily showed traces of its anthropomorphic beginnings.

It does not seem to be commonly realised how all-pervading the act of selection is in scientific work. The scientist chooses his facts ; he selects from a range of possible laws ; he picks out the hypotheses which best conform to his body of more generalized theories ; and finally (as Prof. Russell has shown) he comes to realise that there has been an element of choice in his general theory-systems determined by his "demands" or "ideals of explanation." Yet at no stage in this hierarchy is the objective reference lost sight of. The scientist selects his facts in order to produce the widest possible co-ordinating hypotheses, though the facts must be there to choose from. "In order that the facts obtained by observation and experiment may be capable of being used in furtherance of our exact and solid knowledge," wrote Whewell long ago, "they must be apprehended and analyzed according to some conceptions which, applied for this purpose, give distinct and definite results." The man of science chooses also his laws—generally on the grounds of simplicity. It would be possible, for instance, to replace Ohm's law by a more complicated expression which would agree equally well with observation. Mr. Norman Campbell, in his book *Physics: The Elements*, brings out this arbitrary element in scientific laws. The "truth" of a law, according to Mr. Campbell, depends on its fitting the observations ; but its "meaning" comes from the intellectual satisfaction which the particular law chosen affords. The laws of science, then, are chosen from among other possible laws because they fit into theories "the form of which is dictated chiefly by preconceived ideas of what a theory should be." This introduces a personal element which often determines the type of laws characterizing an age or a country. Nevertheless, we must not forget that if any law can be shown to be "untrue" it will at once be rejected, however much "meaning" it may have.

Again, theories and hypotheses, the next stage in this series of levels, are subject to choice. But here also the selection is akin to natural selection in the animal world. "The world little knows," Faraday said, "how many of the thoughts and theories which have passed through the mind of the scientific investigator have been crushed in silence and secrecy by his own severe criticism and adverse examination." And, finally, it is possible that it is the existence, side by side, of alternative theory-systems (such as those based on general mechanical theory as contrasted with those brought into being by quantum theories) which has focussed attention upon this same element of choice at the highest stage of all. Here, again, we must be careful to avoid assuming that a bare and arbitrary element of personal choice is involved. It is not nearly so simple as that. Dr. Dorothy Wrinch puts the whole matter in regard to these wider and more generalized theories with admirable clearness. She shows that the unusual assumption of a discrete series of states for a physical system, made necessary by quantum theories, can be put in terms of abstract properties of the relation between different states of a single physical system.* The choice between a discrete and a continuous series of states can be related to the general characteristics of compact and well-ordered serial relations. As so often happens, she says, the cogency of our objections, which come from the initial strangeness of the ideas, disappears as soon as those objections are stated in their most fundamental terms. "Physical intuitions," she continues, "as to whether very complicated and obscure relations are discrete or compact are clearly, if I may say so, out of place. We have to assume to be true, whatever fits the facts of experience most adequately." The discontinuities of the Quantum Theory are, she insists, like the paradoxes of the

* "The Quantum Theory in Relation to the Logical Concept of Continuity," *Concepts of Continuity*: Aristotelian Society, Supplementary Volume iv, 1924, pp. 29, 30.

Theory of Relativity; they are "not introduced to fit into our private unofficial view of the universe . . . Their justification rests on their usefulness in knitting together the facts of physics." There is, thus, at every stage in this series of selective processes, an objective reference which purges the choice of anything arbitrary or personal.

V.

Nevertheless, our critic might pursue us still further. Viewing the bewildering range of choice and the litter of discarded facts, laws, hypotheses, and theory-systems, he might exclaim with Mr. Sullivan: "To judge from the history of science, the scientific method is excellent as a means of obtaining plausible conclusions which are always wrong, but hardly as a means of reaching the truth."* Or he might declaim, in the fashion of Mr. Belloc on "The Microbe":—

"Its eyebrows (of a vivid green)
Have never, never yet been seen,
But scientists, who ought to know,
Assure us that it *must* be so.
O, let us never, never doubt
What no one can be sure about."

What the critic would overlook, if he followed these leads, would be the fact that the conceptions and hypotheses of science are never entirely discarded. There is always, as Mr. Sullivan is quick to point out, a part which is incorporated in the next advance. Moreover, as Prof. Poynting once said, "the classification of known phenomena which a hypothesis has suggested, and the new discoveries of phenomena to which it has led, remain as positive additions to natural knowledge when the hypothesis itself has vanished from thought." There is a real sense in which the scientist is (to use a phrase coined by Mr. E. M. Forster for a very different purpose) at an angle with the universe: the man

* J. W. N. Sullivan, *op. cit.*, p. 18.

who is always immediately in the wrong because he is ultimately in the right. The apparent immodesty of this claim is lessened if we consider the successive modifications in the definition of any particular scientific conception. We shall usually find great variation: but though the changes are startling to the uninitiated, there is generally a solid core of positive and cumulative knowledge embodied in the successive definitions and at the same time a drift towards greater objectivity as well as towards greater expressiveness. The difficulty is largely one of language. What is presented on the border lines of knowledge, either to the scientific discoverer or to the ordinary man trying to express some half-conceived but as yet inarticulate thought, is what we may call a syncretic whole. This whole may be somehow realized long before analysis and subsequent synthesis have made possible its satisfactory expression. The words we assign to the complex things of experience may provide a leverage for the understanding prior to any proper knowledge of their true nature. It has often happened that vague and indeterminate scientific conceptions, like that of æther or of the unconscious, have had an instrumental value far beyond what their looseness would lead one to expect—which accounts for the dictum (due, I think, to Helmholtz) that in science a living error is worth more than a dead truth. Many mathematical notions, such as that of continuity, are made practical use of long before they receive satisfactory logical definition. The successive definitions, in cases like these, are pushed at each stage to the limit of their functional value, closer definition following only as the need is felt for it. The final concept, however, approximates more and more to a purely logical entity as it is cleared of the psychological impurity connected with its origin.* If, during this process, we are unsure

* Many examples could be given of this, but I will refer to one only. The conceptions centred about the second law of thermodynamics had, in their early stages, a pronounced anthropomorphic flavour. Yet Planck

of the finality of the conception used at any stage, we need not be over-concerned so long as we can feel assured of a core of objectivity in the complex. I cannot do better, here, than quote Santayana again: "It matters little, therefore, to the pertinent knowledge of reality, if the substance of objects remains recondite or unintelligible, while their total movement and operation is rightly conceived. It matters little if their very existence is vouched for only by instinctive faith and presumption, so long as this faith happens to be true and this presumption prophetic; for the function of perception and natural science is not to flatter our sense of omniscience, but to bring us presently important news of the strange world we live in."*

VI.

A more fundamental attack on the disinterested and detached character of scientific procedure might be made on the grounds that the whole notion of "rendering intelligible" the bodies of primary fact is a regulative ideal which is itself an anthropocentric prejudice. Prof. Whitehead speaks of "the inexpugnable belief that every detailed occurrence can be correlated with its antecedents in a perfectly definite manner exemplifying general principles." "Without this belief," he says, "the incredible labours of scientists would be without hope. It is this instinctive conviction, vividly poised before the imagination, which is the motive power of research: that there is a secret, a secret which can be unveiled."†

had only to set out the series of modifications of the conception, stated in terms of the varying definitions of entropy, to be able to show that it can be expressed in a form independent of all anthropomorphic suggestions connected with early ideas on the subject. See Max Planck, *A Survey of Physics*, pp. 10-27.

* G. Santayana, "Literal and Symbolic Knowledge," *Journ. of Philosophy*, xv, 16, 1918, p. 437.

† A. N. Whitehead, *op. cit.*, p. 17.

It seems to me clear that here is a "demand" behind which we cannot go because it is at the root of all our search for knowledge. Prof. Broad has stated what is involved in this assumption that the world is intelligible. The natural scientist must assume not only that the world obeys the laws of logic, but also that certain other conditions are fulfilled. For example, the changes in the world must be subject to general laws which are not too numerous or too complex for us to unravel; and we must be in such a situation that our sensations come to us in an order which reveals the laws really present. Concerning these further conditions he says: "There is no *logical reason* for believing them, but there is a *practical motive* for acting as if we believed them. The practical motive, of course, is that, if we act on these postulates, we shall go on investigating; and that if, and only if, we go on investigating, we may discover explanations of what is at present unintelligible."* These conditions seem, therefore, to possess the characteristics of a minimum "demand" which must be conceded for rational knowledge of the world we live in: but they also form a maximum beyond which we cannot go if our body of knowledge is to be a science.

* C. D. Broad, *The Mind and Its Place in Nature*, p. 510.



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W.C. 1, on May 31st, 1926, at 8 P.M.*

XIII.—SYMPOSIUM: IS THE MIND A COMPOUND SUBSTANCE?

By G. DAWES HICKS, JAMES DREVER, and J. A. SMITH.

I.

By G. DAWES HICKS.

THE purpose of this discussion is to consider the theory of the mental life that has been propounded, so far as I know, for the first time by Dr. C. D. Broad in his recently published book.* Let me say, at the outset, that the book seems to me to be a work of quite unusual interest and originality; and that, differ though one may from certain of its conclusions, I think no one can fail to derive from it help and stimulation in philosophical and psychological reflexion.

1. Dr. Broad describes the theory in question as a "modification" of what he calls the Instrumental Theory (p. 535)—the theory, that is, according to which the mind is a substance that is existentially independent of the body, and which seems to him for various reasons, ~~to be~~ not wholly untenable, at any rate

* *The Mind and its Place in Nature*, London: Kegan Paul, 1925.

excessively difficult to reconcile with the known facts.* The new theory is, in short, that the mind is a compound of two factors, neither of which in and for itself has the intrinsic properties of a mind, but which, when combined, form a whole that does exhibit mental properties. These constituents are named the "bodily factor" and the "psychic factor" respectively. And an analogy is found in what we can assert of chemical compounds. Certain chemical compounds, namely, have properties which we are unable to deduce from those that are displayed by their elements, taken either in isolation or when met with in other compounds. The characteristic properties of sodium chloride (NaCl) cannot, for instance, be deduced from what we know of the properties of sodium or of the properties of chlorine, or from what we know of other compounds of sodium or other compounds of chlorine. So, too, nothing that we know about oxygen by itself or about hydrogen by itself would enable us to predict the distinctive chemical and physical properties of water. These properties which the complex possesses and which are not theoretically deducible from the properties and arrangements of its constituents, properties which belong to a complex as a whole and not to its parts, are, then, "emergent" properties; and the theory is that mentality is likewise an emergent property of a compound composed of a living body, possessed of a nervous system, *and* of something else, a "psychic factor," which, although it is not a mind, does possess some features that have usually been thought only to characterize a mind.

The considerations which have weighed with Dr. Broad in

* I should have thought, however, that instead of being a "modification," what we have before us amounts to an entire rejection of this view, and to substituting for it an absolutely opposed conception of the nature of mind.

formulating this theory are mainly such as are suggested by the abnormal phenomena that have been investigated by the Society of Psychical Research. He admits (p. 647) that if there were no facts to be taken into account except the normal ones, he should regard as, on the whole, the most reasonable view to take of the status and relations of matter and mind in Nature that which he designates "emergent materialism,"—the view, namely, that materiality is an attribute which is possessed by all substances and mentality an emergent characteristic of material aggregates of a certain kind and degree of complexity. But he is convinced that many of the abnormal features dealt with by Psychical Research cannot be dismissed as illusory, and that in particular there is good evidence for holding that the phenomena described as those of "possession," in which an entranced medium's body appears to be controlled by a dead person, have a basis in fact. What is known about these phenomena does not seem to him either to require or to justify the hypothesis that the mind of a deceased person survives the death of his body; they can be sufficiently explained, he thinks, by supposing that something has persisted for a certain period, that this something was an integral part of the mind of the deceased person, and that it is capable of affecting in a marked way the speech and bodily behaviour of a medium under favourable conditions. I am not going to question Dr. Broad's estimate of the evidence furnished by Psychical Research. He knows much more about it than I do. So far as I am familiar with it, it certainly does not appear to me to have the degree of cogency that he claims for it*. For the purpose, however, of the present discussion we may, I think, be content to accept Dr. Broad's judgment on that point.

* I think I may legitimately refer to Mr. Frank Podmore's two works, *Spiritualism: A History and a Criticism* (1902) and *The Newer Spiritualism* (1910) in support of this judgment.

2. That the mind is a compound of two heterogeneous factors is not in itself a novel view. In a sense, I suppose, it might not unfairly be said that the Kantian theory of the "empirical subject" would amount, if it were pressed, to some such conception. The two functions of sensibility and thought were often so sharply contrasted by Kant that they would seem to be two absolutely disparate constituents of mind, which are only brought together through means of a *tertium quid*. It is true that Kant speaks of sensibility as a capacity of obtaining presentations through the mode in which we are affected by objects. But it is difficult to see what, on his view of the "empirical subject," such "affection" could be other than bodily "affection"; and, indeed, in his posthumous work, he repeatedly asserts that sensations are due to the action of "the moving forces of matter" upon the sense-organs. Certainly, however, his view of the nature of the other constituent is totally different from Dr. Broad's; and the notion of mentality as an emergent characteristic is foreign to Kant's way of thinking.

3. As regards the conception of "emergence," I will content myself with laying stress here upon one consideration. "I know no reason whatever," Dr. Broad says, "why new and theoretically unpredictable modes of behaviour should not appear at certain levels of complexity, or why they *must* be explicable in terms of elementary properties, and laws of composition which have manifested themselves in less complex wholes" (p. 73). Nor do I. But it is, I take it, implied in this assertion that the appearance of these new modes of behaviour is *in some way* dependent on and conditioned by the complex in question, that it is not, in other words, a pure matter of accident that the emergent qualities appear in connexion, or in correlation, with a particular complex, or that they might have appeared here, there, or anywhere, independently of such complex. If, however, so much be granted, there remain several alternative ways in

which the notion of "emergence" might be interpreted. (a) It might imply that the constituents of the complex have properties—"latent" properties, if one may use an ambiguous term—which do not evince themselves save when the constituents are brought into specific combinations, and that would mean that these constituents are, in truth, even in isolation, much more than we regard them as being. Or (b) it might imply that the constituents have no properties other than those which evince themselves, or could evince themselves, in those constituents in isolation, but that the way in which the constituents with these properties can in combination give rise to new properties is, through lack of knowledge, indeterminable by us. Or (c) it might imply that the complex is more than the sum of the constituents that we have taken account of, that these constituents cannot in fact be isolated from their environment, and that in the complex these related factors are involved. Or (d) it might imply, that what we are calling the "new" property is not a resultant of the coming together of the constituents in the complex at all, that it does not, in fact, arise as a new creation consequent on that event, but that it was already present in the universe, and in virtue of certain conditions hidden from us manifests itself in a particular form in conjunction with the specific complex in question. Either of these alternatives is possible, and obviously the contention that mentality is an emergent characteristic would assume a different aspect according as one or the other of these interpretations be accepted.

4. I turn now to the specific question we have to discuss. "We have," writes Dr. Broad, "a set of facts which point to the dependence of mind on body. One explanation is that mind depends on nothing but body, *i.e.*, that mental events either *are* also bodily events, or that at any rate they are all *caused* wholly by bodily events, and do not in turn affect either each other or the body. The present explanation is that the mind is a compound

of the body and something else, and that mental events and mental characteristics belong to this compound substance and not to its separate constituents" (p. 538). With this passage in view, I will plunge at once *in medias res*.

In the first place, the compound is declared to be a "substance." Going back to an earlier part of the book (pp. 22-23), we learn that that which is a substance must have (a) the "substantial attributes" of duration and of standing in causal relations, or of appearing as enduring and causally related, (b) *some* special or "differentiating attribute," which is not essential to substance as such, which is a determinable that is not itself a determinate under any higher determinable, which if it belongs to any complex as a whole must belong also to all its parts, and which must be a simple attribute. It at once becomes questionable, I think, whether a mind can be said to be a substance in this sense.

In the second place, one of the constituents of this compound is taken to be "the body." By "the body" is evidently to be understood the *living* organism, for obviously no combination of the other constituent with a body whose life has ceased will give rise to mental events and mental characteristics. Presumably Dr. Broad conceives of life or vitality as one emergent characteristic and mentality as another (*see e.g.*, p. 582); but, as he frequently speaks of the mind as *animating* the body, even when it is not "controlling" it (*e.g.*, pp. 393 and 400), one would gather that he regards the mental life as a specific mode of life, that mode of life, namely, which we mean when we speak of the life of the body as a whole. It is admitted that "we never find highly developed organisms without minds, any more than we find minds without organisms" (p. 660). A living organism, in the case, at any rate, of the higher organisms, is virtually always an organism that possesses mental life, so that the bodily factor will in this respect, be analogous to those groups that are referred to (p. 56) as familiar in organic chemistry, radicals such as CH_3 .

and $C_6 H_6$, which hitherto have not been found to exist in isolation (although I understand it is not altogether impossible that they might do at very low temperatures), but which play nevertheless an essential part in determining the characteristic behaviour of certain compounds. Elsewhere the bodily factor is described as a "living brain and nervous system" (p. 651), but again we find no brain and nervous system that functions as a whole without also being the seat of mental life. Accordingly, it would appear that the union with the other constituent must occur when the bodily factor is in the embryonic stage and either before or at the moment of birth. I will not attempt to work out the consequences of such an assumption, though some of them would, I imagine, be of a perplexing character.

In the third place, as regards the other constituent, the "psychic factor," it is more than difficult to obtain from Dr. Broad's account so much as the vaguest idea of its nature. Admittedly, any characterization of it must be extremely hypothetical; but still certain positive statements are made about it which I have struggled without success to combine into a coherent view. In the passage cited above, it is definitely asserted that neither mental characteristics nor mental events belong to it. Nevertheless, from other passages one would gather that it is doubtful whether so much can be laid down. "There is at present," we are told, "no reason to believe and strong reason to doubt that it has the higher factors of mentality." It may possibly have some of the lower factors of mentality, such as sentience; but from the facts there is nothing to be gleaned that requires or suggests this hypothesis (p. 651). In any case, however, whether it has any of the factors of mentality or not, it must be capable of persisting for a period, at least, after the death of the body, with which it has been conjoined; and it must be capable, when separated from that body, of carrying "traces" of experiences which happened to

the mind of which it was formerly a constituent. In other words, it must comprise what is elsewhere (p. 391) called a "mnemic mass," which consists of "traces" and "dispositions." Now, one of the things that baffle me in regard to the conception before us is this. It is expressly maintained that there are no known grounds whatsoever for assuming that "traces" and "dispositions" are "mental states" or "mental events" (pp. 358 and 389); and so far, the ascriptions of "traces" and "dispositions" to a "psychic factor" to which neither mental characteristics nor mental events belong might perhaps be allowed to pass unchallenged. But Dr. Broad works out an elaborate theory of "traces" (p. 465 *sqq.*)—and either it or a physiological theory of them he is, I gather, inclined to favour—according to which a "trace," though not itself a mental event, is "a characteristic modification in the qualities of mental events or in the relation which binds contemporary mental events into a single total state of mind." The theory requires us to picture the mental life as having no real gaps in it, and the apparent gaps as filled up by non-introspectible mental events that are of the same general nature and have the same kind of mutual relations as those which we can introspect. And the "trace" will be the characteristic modification of quality or structure imposed on each total state by the total state immediately preceding it. It is, no doubt, perfectly conceivable that certain qualities of the mental events of one total state of mind should be transmitted to the mental events of the next total state of mind, and so on. What, however, I utterly fail to understand is how either the qualities of mental events or modifications in the qualities of mental events or in the relations of mental events can be transferred to an entity which does not consist of mental events at all, and how they can persist there, ready to help in constituting other mental events when a suitable organism is available. If qualities of mental events

or modifications in such qualities are to "persist" in an entity other than that in which they originally appeared, surely it is requisite that the entity in question should at any rate contain mental events to serve as the bearers of these qualities or modifications. The bare possibility is indeed allowed that the "psychic factor" may possess sentience; but, apart from the fact that, of all mental characteristics, sentience would appear to be most of all dependent on bodily conditions, and, therefore, least capable of persisting when these bodily conditions are withdrawn, it would still be extraordinarily hard to conceive how qualities or the modifications of qualities of the higher mental processes can persist in mental processes that are of the lowest type of all. Nor do I think that the perplexities of the situation would be in any degree lightened if the alternative theory of "traces" were chosen, and they be interpreted as purely physiological phenomena. In that case, "traces" would have to be regarded as "simply modifications in the minute spatial or spatio-temporal structure of our brains and nervous systems, which are propagated from one state of the brain and nervous system to the next state" (p. 468). Such modifications could clearly not persist in a structure which, whatever it be, is *ex hypothesi* totally different from the structure of the brain and nervous system. It is true that Dr. Broad does not exclude the possibility of the "psychic factor" being a material entity, but he admits that if it be material, the matter must be matter of a peculiar and unusual kind—matter, namely, that does not produce ordinary physical and chemical effects, and which does not manifest itself to sense-perception (p. 561). How, then, could it carry "traces" of the kind just indicated? In short, it seems to me clear that the "psychic factor," conceived in any of the ways suggested, would be utterly incapable of fulfilling the functions which it is required to fulfil, in order to justify the assumption of its existence at all.

5. But let us now look at the theory more in detail. If the mind be a compound substance of the kind depicted, and if mentality be an "emergent" characteristic, it is evident, I think, that the analogy which Dr. Broad endeavours to constitute between this compound and certain chemical compounds very soon breaks down when the comparison is pressed a little further. The characteristic properties of sodium chloride cannot, it is true, be deduced from what we know of the properties of sodium and of the properties of chlorine. The "emergent" qualities arise, in some way which we cannot fathom, through the combination of these apparently heterogeneous elements. But both of these elements have existed before in isolation, and we have no reason whatever for supposing that the characteristics of either of them are dependent on the prior existence of the compound. The case, however, is quite otherwise with respect to the constituents which, according to the theory we are considering, are to be thought of as composing a mind. On the one hand, the "bodily factor" has grown and developed only through being a constituent of the compound called the mind; the entire evolution of the bodily organism from its rudimentary stage in the amœba to its highly complex structure in the man would have been in no other way possible; and had there been on the earth no minds, it is safe to assert there would have been no brains and nervous systems for "psychic factors" to unite with. On the other hand, it is equally certain that the "psychic factor," so far at least as its essential characteristics are concerned, can only be an entity whose structure has been gradually formed in and through the development of mind. As we descend the scale of mental evolution and attempt to contemplate the nature of the primitive mind it becomes increasingly embarrassing to assign any function whatsoever to this so-called "psychic factor." Dr. Broad evidently finds himself not a little nonplussed with the problem that confronts him in respect to such fairly evolved

creatures as earwigs, and he suggests that perhaps for the whole tribe of earwigs there may be only one "psychic factor," the very trivial differences between the mind of one earwig and that of another being due simply to differences in their bodily organism (p. 538). I do not know whether it is meant that this one "psychic factor" would still contain "dispositions and traces;" but, however that may be, there would evidently come a stage for which it would be necessary to postulate a "psychic factor" altogether destitute of them, a sort of primitive "psychic factor," I suppose, for all the primitive modes of mental life. And what its nature could conceivably be Dr. Broad has certainly most effectively shut himself off from any possibility of determining. In another connexion, he has occasion to observe that the hypothesis of universal sentience seems to him "rash to the last degree" (p. 645). Yet apparently the hypothesis of a universal "psychic factor" that is neither mental nor, in the ordinary sense of the term, material, that is neither sentient nor conative, that possesses, in short, none of the features which are usually described as psychical, does not strike him as open to a similar charge.

6. I confess I am in grave doubt as to what exactly Dr. Broad intends to have understood by the term "mind." He seems to me to be using the term in more senses than one. I do not mean, of course, merely that he is admitting the possibility of various *theories* as to the nature of mind being true. I mean that when he is engaged in working out what he judges to be the most likely view, he appears to employ the term now with one significance and now with another. A mind, we are told in one place (p. 390), must have a peculiar kind of content and a peculiar kind of structure. Its content consists of the kind of events which we call "mental," and which we observe in introspection. Its structure is characterised by the ways in which these mental events are interconnected, and among such relations an important

place must be given to mnemonic relations. Now, when it is said that the mind is a compound of the body and something else, one would naturally interpret this as implying that the compound substance is at once material and mental, and that the events which make up its content are both mental and material. For it can scarcely be supposed that the material constituent loses its material character when it enters into combination with something else. Indeed, it is admitted (p. 625) that emergent materialism does imply that the events in question are both material and mental; and, after a survey, in the last chapter, of the seventeen possible types of theory, the conclusion is drawn that "some form of the Compound Theory which is compatible with Emergent Materialism" is that which best accords with the available evidence (p. 625). And an attempt is made to show that, while there is no direct empirical evidence that what has mentality ever has also materiality, yet there is likewise none to support the proposition that the presence of mentality in an object entails the absence of materiality from it, nor any indirect way of proving this proposition. But, in other portions of the work, so violent a contrast is drawn between mental substances and material substances that the inference would seem to be inevitable that the "mind" and "mental events" are certainly not also material. "A mind, as such, does not seem," it is argued, "to be a spatio-temporal whole; we can, therefore, hardly talk of its spatio-temporal structure. If we want to talk of spatio-temporal structure in this connexion, we have to desert the mind and start talking about the brain and nervous system" (pp. 438-39). Quite so; but it is only the *living* brain and nervous system that in this case will serve our purpose, and the living brain and nervous system must already contain, according to the compound theory, the "psychic factor" which *should* constitute it a mind. Yet it is more than once asserted that "in many respects an organism is a kind of half-way house between

an inorganic material substance and a mind " (*e.g.*, pp. 438 and 464). The fact is that here, as in various other places, Dr. Broad seems to be regarding the mind, not as identical with the compound, but as made up of events which are distinct from the events that make up the compound, although doubtless caused by those events, or existentially dependent upon them. And how the "psychic factor" of the compound can become the receptacle of the "dispositions" and "traces" of the mind is then, if possible, still more of an enigma than before.

7. Whichever of these two conceptions be selected, I think Dr. Broad's treatment of the mind and its processes suffers from the defect that he is constantly on the search for analogies in the physical world. I sympathise entirely with his effort to withstand the tendency towards representing body and mind as two utterly disparate series of events, which somehow come into combination. I agree that whatever independence we may be induced to assign to either of them must not be absolute independence, and that, ultimately, both must form portions (if, for the moment, I may be permitted to use a vague term) of one interconnected real process. This consideration ought not, however, to blind us to the fact that mental events differ fundamentally from material events. I leave out of account, meanwhile, what Dr. Broad calls "unowned mental events," because, if there are such things, admittedly we can know nothing about them. Confining attention, then, to events that are "indubitably mental" (p. 305), I think we can say of them that they exhibit a unique doublesided aspect, a duality of nature, as contrasted with what may be described as the singleness of aspect presented by material events. Each distinguishable phase of the mental life is, namely, *at once* a mode of being aware of a certain content *and* a mode of what, for want of a better expression, one may designate "being for self." The content may be confused and indistinct enough, the reference to self may be

merely contained in an obscure stirring of feeling, but both are there as characterizing and defining the mental state in question. And the form of unity that is peculiarly characteristic of mental life rests, it seems to me, on the fact that in each of its states or modifications, the mind or subject is thus in some way and to some extent aware of self, although, of course, it is a long road from the obscure self-reference of the primitive mind to the self-consciousness of the mature mind. In other words, when the mental life is described as a unity, it ought at once to be recognised that we are employing a term which will not, on account of the very nature of that to which it is applied, have the significance which it bears in reference to material objects. The unity which we ascribe to a material object is based largely on artificial considerations, and involves a mode of connexion among the parts to which the mental life, so far as I can see, offers no analogy. Dr. Broad divides all theories about the unity of mind into two groups—namely (*a*) centre-theories and (*b*) non-centre theories; but I cannot find that either do justice to the facts of the case. On the one hand, a “pure ego” which either *has* its states or *to which* mental events happen would be, as Dr. Broad himself points out, more or less analogous to a region of absolute space in which sometimes one quality, sometimes several qualities, and sometimes perhaps no qualities inhere (p. 590). On the other hand, the theories which seek to explain the unity of mind by the ways in which the mental events, of which it is assumed the mind consists, are related to each other, appear to be obviously framed on the analogy of the manner in which the parts are taken to be related to the whole in a physical thing. If we must have an image or picture for such general idea as we can form of the whole mental life, I suppose that of a continuous flow or stream would be the least misleading; but we cannot adequately represent the unity and continuity of the mental life by anything drawn

from the image of a physical stream or flow, because such unity and continuity as the latter possesses is more for the external observer than for the stream itself. But a conscious subject is not in a position to be himself an onlooker at the temporal flow of his own mental states; unity and continuity cannot, therefore, have for him the significance they would bear for a supposed 'external spectator. The conscious subject describes himself as *one*, because in all the variety of his experiences he is, in some measure and to some degree, aware of himself. As Lotze puts it, "our belief in the mind's unity rests not on our appearing to ourselves as such a unity, but upon our being able to appear to ourselves at all." The conscious subject regards his mental life as *continuous* because of certain features exhibited by the contents of his actually present experience, of what at the moment he is actually aware—the fact, namely, that such contents always more or less involve and imply a reference beyond themselves, a reference to the past and it may be to the future. There is no unity or continuity in the process of cognizing, feeling and conation which is not essentially dependent upon the unity and continuity of what is cognized or felt or sought. And, as regards this kind of unity and continuity, it would stand in no conflict with what an outside observer might describe as periods of unconsciousness. It may well be the case that since our mental life is bound up with bodily conditions, of the relations of which to it we know little or nothing, there will frequently be on its current, as viewed from without, gaps or pauses; and I can see no need for recourse to the hypothesis of a "pure ego" in order to conceive of those gaps or pauses as being somehow bridged over. Nor does it seem to me that the phenomena of multiple personality need occasion in this respect any real difficulty. For there is exhibited in each of these apparently disconnected mental lives the same internal unity and continuity that we find in conscious experience

generally. I am prepared, then, to say that the mind *is* its mental states, rather than that it *has* them; but I am not prepared to say that an aggregate of mental states, externally interrelated, is the mind. Indeed, Dr. Broad himself doubts "whether anyone except a philosopher engaged in philosophizing believes for a moment that the relation of 'himself' to 'his toothache' is the same relation as that of the British Army to Private John Smith" (p. 484). That the mental states of a mind, no less than the contents apprehended through them, are related to one another, and in a very intimate fashion, is, I take it, unquestionable; but the relation need not be of that nature which is exemplified in the relations to one another of physical events. The unity of an individual mind is, as Stout, in a recent article,* has skilfully expressed it "the unity of a complex whole, which is indivisible inasmuch as its partial ingredients have not an independent existence of their own, such that the whole could conceivably be constituted by taking them separately and then combining them." A unity of this kind is, as Stout further points out, likewise to be found in organic life, although in the mental life "it is, beyond comparison, most fully developed and most clearly recognizable."

8. What I have just said will enable me to add a word or two upon the doctrine of "traces," which figures so prominently in Dr. Broad's treatment of the mind. He does not, of course, lend his countenance to the crude view that has often been prevalent in popular psychology. He acknowledges that we know nothing with certainty about the intrinsic nature of "traces"; he will assert little more of them than that they are "mnemic persistents" which last for a long while and fill the gaps between transient states of mind. The grounds on which he feels

* *The Monist*, Vol. XXXVI, p. 51, 1926.

constrained to assume the existence of "traces" are, as I gather, the following. He holds that as physical events are causally connected, so also are mental events. He holds further that while regular sequence is not what we *mean* by causation, it is one of the signs by which we judge that the causal relation is present. In itself, however, it is not an adequate sign. There must be in addition a certain temporary continuity between the sequent events; all the independently necessary conditions of an event must either be continuous with it or immediately precede it. Now, in the case of a present memory of a past experience, this requirement is not fulfilled, if it be supposed that the past experience and a present stimulus are the complete cause of the present memory. The temporal gap between the past experience and the present stimulus must be filled with persistent conditions that stretch right up to the beginning of the effect. It is true that one general persistent condition (*e.g.* the general integrity of the brain and nervous system), might conceivably suffice; but, while he will not definitely rule out the possibility that a merely general continuity is sufficient, yet, for certain reasons which I need not go into, the more likely supposition seems to him to be that there are special persistent conditions for different experiences. Whether these special persistent conditions, or "traces," are purely mental or purely physiological or both, he will, again, not undertake to decide. If they are physiological, they will be modifications in the minute spatio-temporal structure of the brain and nervous system, which will be propagated from one state of that structure to the next state, and so on. If they are mental, and if the assumption of a "pure ego" be discarded, the account we shall have to give of them will be more complicated. We shall then have to suppose that the apparent gap between an original experience and the revival of it in memory is filled up by unconscious or non-introspectible mental states and processes; and that these have characteristic

qualities and stand in characteristic relations to each other. And, as I indicated above in another connexion, the "traces" will not be these unconscious mental events themselves, but certain qualities of them that are handed down to subsequent mental events, or certain of their relations which are "impressed upon" the mental events succeeding them, and so on indefinitely.

As regards the theory last mentioned, it is evident that if unconscious mental states and the "traces" which they are assumed to carry are to be postulated at all, it will have to be on a prodigiously lavish scale. There would appear to be no end to the countless varieties of experiences that would thus leave behind "traces" of themselves; and we should be compelled to conceive of the mind of every normal human adult as an enormous storehouse of unconscious mental events, in comparison with which the conscious portion of the mental life would be infinitesimal indeed. The question whether an individual mind could endure so burdensome a load can hardly be dismissed as a trifling question. It would no doubt be urged that the innumerable "traces" within the compass of any one mental life are not to be pictured as merely subsisting side by side; that they are rather to be thought of as forming vast and elaborately organized systems. Yet, even so, the magnitude of the mechanism that will have to be assumed will still remain overwhelming; and in addition, there will be the further problem of accounting for the fact of so complicated a process of organization being effected in the region of the "Unconscious." Now, I know, of course, the sort of rejoinder that an objection of this kind is sure to meet with. It will be contended that the devices of Nature are, as a matter of fact, infinitely varied and that we need not, therefore, be staggered by the complexity of the "mental structure" that is here called into requisition. But this contention does not, I confess, in itself impress me; it could be used to bolster up any theory, however fantastic, that might be advanced

to explain phenomena the conditions of which are unknown to us. And I have an uneasy feeling that the mechanism we are bidden in this case to contemplate is an extraordinarily clumsy one, suggestive rather of the mode of procedure of an unskilled craftsman or of the theory of epicycles of astronomers before Copernicus than of what we actually know of the mind's method of working. Not only so. No attempt is made to show *how* these assumed persistent factors subserve the function for which they are declared to be necessary. Dr. Broad is emphatic in asserting that what persists is not an experience itself but the "trace" of that experience. "And," he writes, "there is no more positive reason to suppose that the trace of an experience resembles it or any other experience than to suppose that persistent deafness resembles the attack of scarlet fever which left it in the patient" (p. 359). Be it so ; in what way, then, does the presence of a "trace" assist me in recognising that a man whom I chance to meet to-day is the same individual with whom I was conversing (say) a year ago ? Apparently what the "trace" when it is "excited" by the present stimulus has got to do is either (a) to produce the awareness of a memory-image resembling the past event or else (b) to make me cognize directly the past event which left the "trace" (pp. 444-45) ; but not so much as the remotest hint is given as to the manner in which it is supposed to operate in contributing to the accomplishment of either of these things.

But, it will be maintained, in order to justify the "trace" theory, one is not called upon to exhibit the way in which the "trace" when it is "excited" by the present stimulus actually gives rise to the memory. If it be granted that the memory is causally produced, and that in that case all its independently necessary conditions must immediately precede its occurrence, then the existence of "traces," whatever be their nature, has been virtually conceded. I should meet this contention by

raising at once the question whether it is at all possible to apply the notion of causal connexion within the sphere of subjective experience and to the mental events that condition subjective experience. The difficulties in the way of carrying out what no doubt represents our first natural mode of interpreting the facts has repeatedly made itself felt, and certain philosophers have been led to distinguish two types of causality—causality such as is manifested in physical nature and causality as it is manifested in the mental life. Thus, for example, Wundt would differentiate between physical and psychical causality, and Mr. Russell between natural and mnemonic causal laws. I would, however, go farther, to the extent of urging that to employ the term “cause” in this two-fold sense is an error, and that we are bound to inquire whether we are at all warranted in viewing the two kinds of connexion—that between material events and that between mental events—as being on the same level. I cannot see that we are. Not only does the conception of causation as used in physical science presuppose a certain identity in essential nature of the entities that are said to be causally connected, but I think it involves the additional thought that the entities or events in question are exclusively objective phenomena. I must not attempt here to defend this position; I will note simply that, if it be defensible, it affords a ready means of determining where a limit to the application of the notion of “cause” should be drawn. Wherever, namely, the entities or events under consideration cannot be treated as objects merely, but can be construed only in a fashion other than what is appropriate in the case of objects, there the application of the thought of causal nexus is illegitimate. Now, it seems to me that in Dr. Broad’s discussion of the problem there can be found abundant reasons for concluding that the proposition just stated is not devoid of justification. It is true he tries to show that comparable to the fundamental causal characteristics of matter,

such as inertia, gravitational attraction, etc., there are certain general "mental powers," characteristics of all minds—*e.g.*, the power of cognizing, the power of being affected by past experiences, the power of association—where, if I am right, there is no such comparability. But he is compelled, all the same, to recognize many striking and crucial differences. For one thing, a mind in the course of its development is continually acquiring new and extremely determinate powers, while there is nothing analogous to this in the case of matter. And, more important still, he draws attention to the circumstance that "it is characteristic of modern science as contrasted with mediæval science to correlate causal properties with minute spatial or spatio-temporal structure, and not to take them as ultimate facts" (p. 434), whereas a mind does not seem, at any rate, to be a spatio-temporal whole, nor to be composed of unobservable minds as a material substance is composed of bits of matter (p. 439).^{*} I should be prepared, then, to take my stand on the last-mentioned difference, and to insist that it alone ought to suggest a doubt as to whether the mode of connexion between mental states is at all comparable to the mode of connexion between physical events.

^{*} In the later chapter on "The Unity of the Mind," the force of this admission would appear, however, to be weakened. The attempt is there made to show how it would be possible to take the notion of a material event as fundamental and to construct the notion of material substances out of it, without assuming absolute space in Newton's sense. And, then, an effort is made to show the possibility of likewise taking the notion of mental event as fundamental, and the notion of mental substance as derivative. But for the latter undertaking it is necessary to assume that every mental event has not only a determinate temporal position but also a determinate "mental position," corresponding to the "spatial position" of material events (p. 599) although as to what the term "mental position" is supposed to signify no help is afforded for determining.

The upshot of the matter is that while I do not wish to maintain that there are no persistent conditions involved in the structure of the mind, I am not by any means convinced that we are driven to a theory of "traces," such as Dr. Broad has delineated. From what we know of the nature of mind, I do not think we are entitled to lay down the dogma that all the independently necessary conditions of a memory *must* be present in the state of things immediately preceding it. And, in particular, I am more than sceptical in regard to the existence of *special* persistents on the huge scale which the "trace" theory would seem to necessitate.

9. Let me revert, in conclusion, to the doctrine of the mind as a compound substance, or rather as a compound substance of the kind which Dr. Broad takes it to be. The doctrine seems far more allied to the biological doctrine which he has called "substantial vitalism" than to that which he names "emergent vitalism," and in criticising the former he has himself supplied us with arguments (pp. 57-58) that can be pressed against this doctrine of his own. It is objected, namely, to the explanation of vital behaviour in terms of entelechies, in the first place, that no entelechy, or anything like one, has ever been isolated, that an entelechy is a *purely* hypothetical entity in a sense which a hitherto unisolated chemical element is not. That statement is clearly equally true of the assumed "psychic factor." It is objected, in the second place, that whereas we can pass a chemical group, hitherto unisolated, from one compound to another, and note how the chemical properties change as one compound loses such a group and another gains it, there is no known analogy to this with entelechies. "You cannot pass an entelechy from a living man into a corpse and note that the former ceases and the latter begins to behave vitally." So in precisely similar manner it can be urged that you cannot pass a "psychic factor" from a living man into a corpse and note that the former ceases

and the latter begins to behave mentally. It is objected, in the third place, that since entelechies are supposed to differ in kind from material particles, and it is doubtful whether they are literally in space at all, it is hard to make out what is meant by saying that a living body is a compound of an entelechy and a material structure. But, and for exactly similar reasons, is it any easier to understand what is meant by saying that a mental life is a compound of a "psychic factor" and a material structure? Indeed, I am not sure that what Dr. Broad further contends in regard to entelechies might not also be contended, with little change of terms, in regard to "psychic factors." Entelechies, he thinks, seem plausible to some people because they modestly conceive of them as very inferior minds or as the inferior parts of the minds which animate organisms. Yet this modesty is, he insists, altogether out of place; if the hypothesis is to explain anything, the entelechy must be thought of as either a superior mind or a superior part of the mind which animates an organism. I am inclined to press the very same consideration in reference to "psychic factors." For consider the functions which these "psychic factors" have to discharge. The presence of a certain sitter "attracts" (whatever that may mean) the "psychic factor" of a dead man who was known to him. The man may have died in Bombay, and the sitter may be in a séance in London, yet somehow or another the particular "psychic factor" that is wanted finds its way to the right quarters, and communicates with the one medium with whom it is required to communicate (p. 54). Is it alleged that this is a pure matter of chance, and that the "psychic factor" behaves in a wholly arbitrary fashion, that it might equally well have been any one of a myriad other "psychic factors" that may be "blowing about the universe"? I imagine that it would be difficult to reconcile such a contention with any numerical measurement of probabilities. I leave out of account many

other perplexities of the situation (such, for example, as to how it comes about that *this* "psychic factor" contrives to oust for a while the "psychic factor" of the medium herself, and then to depart leaving the latter once again in possession), in order to enforce this one point. Such wonderfully alert, "psychic factors," that when separate from the bodies with which they have been conjoined, are up to so much that is usually associated with intelligence, would certainly seem to be a little too modest in disclaiming the attributes of mind !

II.

By JAMES DREVER.

WHILE agreeing with Professor Dawes Hicks on practically all the main points of his criticism of Dr. Broad, I cannot help feeling that no really profitable discussion of the topic before us is possible, unless more fundamental issues are raised. For my part, I cannot attempt to answer the question as it stands either affirmatively or negatively, for the simple and sufficient reasons that I am unable to attach any definite meaning to it. Nor does Dr. Broad's discussion seem to help very much. On the one hand, the evidence he adduces to prove that mind is a compound substance does not seem adequate to prove that proposition even in the sense in which he understands it. In other words, Dr. Broad appears to have failed to establish his thesis and his whole argument suggests, that the thesis itself is of such a kind that the evidence required to establish it may well be beyond attainment in the present state of human knowledge, and possibly with the present limitations of human faculty. On the other hand, even if the evidence Dr. Broad seeks were available in an incontrovertible form, it is more than doubtful whether it could be accepted as proving the thesis that mind is a compound substance, though it might prove that the human being or the human personality is dissociated at death into cadaver and ghost, the human mind as such possibly ceasing to exist.

1. The first fundamental question that must be asked and answered before the question under discussion becomes intelligible is: in what sense, if any, can we regard the mind as a

separate or separable entity in the world of the real? Or, to put what is really the same question in another form, what is it we are calling the mind when we ask the question, whether it is a compound substance? As Professor Dawes Hicks has pointed out, Dr. Broad has by no means succeeded in making clear what he means by "mind." Moreover, it is by no means certain that his view of the mind is definite and consistent throughout. He himself appears to be conscious of the difficulty, for, in a passage already referred to by Professor Dawes Hicks, he begins: "I do not know how to define a 'mind'," and goes on to say that it is a thing "with a peculiar kind of content and a peculiar kind of structure." The peculiar kind of content consists of those mental events which we observe when we introspect. Except for the implications of the term "content," used in this connection, this seems plain enough. These mental events are peculiar because of that very "inside view" in virtue of which they can be observed. This inside view is one of the fundamental characteristics of conscious process, and in conscious process we have our only direct contact with "mind." What it may be over and above these events must be matter of inference. Moreover, the composite character of these mental events is no new discovery, nor is it this that Dr. Broad means when he asserts the composite character of mind.

On the other hand, the "peculiar kind of structure" immediately raises formidable difficulties for Dr. Broad, as for practically everyone else who has tried to define a "mind." There are obviously two kinds of structure present in the mental life—what we may call for convenience "cross-sectional" structure and "longitudinal" structure. Which of these is to be taken as the kind of structure peculiar to mind? Is either really so? The cross-sectional structure of mental life, the structure of what some American psychologists have called the "moment-consciousness," is peculiar in respect of the elements composing it—

the mental events we have just been considering—and in respect of the mode of relatedness of these elements to one another, but it is not easy to see how the structure *qua* structure differs from that of any complex event. The longitudinal structure again appears to be a structure more or less characteristic of life as such, and not peculiar to mental life. But it is obviously a structure involving quite a different order of constituent element from the cross-sectional structure. This constituent element is what Dr. Broad has called the “mnemic mass.” If these mnemic masses can be regarded as peculiar to mind—the probability is the other way—we should apparently have “mind” characterized not so much by any peculiar kind of structure as by two peculiar kinds of constituent factors, the mental events which we observe when we introspect, and the mnemic persistents which have been variously designated dispositions, traces, and the like. In both cases it is possible to regard these factors as compounds, but surely not in the same sense !

2. A second fundamental question that must be asked and answered is the question: is the mind a substance? The substantial attributes, to which Dr. Broad appeals as criteria of substantial character, are duration, and the capability of standing in causal relations. So far as mnemic persistents are constituent factors of mind, it can certainly be said to have some sort of duration, though one would hardly like to say that it has duration as a mind. The other order of constituent factor may be said to have the duration of process rather than the duration of substance. At the same time it seems to me that Dr. Broad’s “mind” is sometimes “personality” or “Ego.” This also has duration. We have here then persistence of stuff and persistence of form. The two, as Dr. Broad has shown, are not reducible to one. I venture to doubt, however, whether either affords very convincing evidence of the substantial character of “mind,” as such. The doubt arises from the fact that it

is possible to interpret the persistence in the one case as persistence of body, and in the other as persistence of organism.

With respect to the other substantial attribute, the position appears to be superficially somewhat different. Capability* of standing in causal relations is somewhat ambiguous. As far as I see, we can get rid of the ambiguity in only one way, and that is by using terms to which Dr. Broad would, I am afraid, object. At present it may mean capability of acting, or capability of being acted upon, which seem to be different, but equally essential, substantial attributes. Now Dr. Broad has a good deal to say about causation first and last, but about the activity aspect, as such, of the mental life, about impulse, instinct, will—all that Stout means by the term “conation”—there is not a great deal that is to the purpose. Yet surely these phenomena have a very direct bearing on the question of the substantiality of mind, if we are going to decide this on the basis of capability of entering into causal relations. Nevertheless, these phenomena belong to the order of mental events observable by introspection—process not substance. A similar criticism falls to be urged in respect of the passivity aspect. Where does feeling come in, and what is its significance with reference to the substance problem? Here, too, we may, I think, say that personality may possibly have the substantial attribute, or rather the substantial attributes, cited, but unless we identify “mind” with personality, it has yet to be proved that “mind” has either.

3. A third, and as far as the present paper is concerned last, fundamental point requiring to be cleared up is the sense that Dr. Broad attaches to the word “psychic,” when he speaks of mind as a compound of a “psychic factor” and a “bodily factor.” I am at one with Professor Dawes Hicks at this point. If the bodily factor is to be taken as the living nervous system, then, so far as normal phenomena of the kind we call mental are

concerned, there does not seem to be any room or function for a "psychic" factor. The "psychic" factor is only required when we seek to explain the supernormal phenomena which Dr. Broad believes to be involved in mediumship and the like. If Dr. Broad is right an enormous number of new and difficult problems immediately emerge, and the acceptance of his views will open more problems than it will solve. One group of such problems is indicated by his discussion of the "psychic" factor of the earwig or earwigs. What of the "psychic" factor of still lower organisms down to amoeba ?

That line of thought, however, I do not intend to pursue. But in connection with his views regarding the "psychic" factor Dr. Broad makes a statement regarding psychology which cannot be allowed to pass. Psychology, he says, at the present time "hardly deserves the name of science," and will remain in this "unsatisfactory state until some one does for it what Galileo, Descartes, and Newton did for physics" (440). His point is that in physics, as a result of the work of these and others, "the various causal characteristics of physical things can be connected with each other by correlating them all with characteristic forms of spatio-temporal structure and a few very general and pervasive causal characteristics." Thus does Dr. Broad suggest a task and an ideal for psychology, which arise out of his doctrine of a "psychic" factor. The task and the ideal are such as no psychologist is in the least likely to accept. It would indeed appear that physics is at present the only science deserving of the name. If a corresponding science of "psychics" ultimately takes shape well and good. In the meantime, the psychologist is content to work alongside of the physiologist and the botanist, and to aim at such science as they aim at. The methods of investigation appropriate to deal with Dr. Broad's "psychic factor" may be the methods of the future science of "psychics," but are certainly not the methods of the psychology of to-day. Rightly so, if the

phenomena which psychology studies nowhere demand the assumption of a "psychic factor" in Dr. Broad's sense.

To conclude this brief, discursive, and somewhat dogmatic criticism by an attempt to answer the question set, I should say that there is no evidence that "mind" is a "thing," as Dr. Broad puts it, that is, a separate, concrete entity. We know mental events, but not mental things. Hence one may, I think, argue on the evidence at present accepted by all of us, that "mind" is not a substance, either simple or compound. I have a feeling, but it is little more than a feeling at present, that the notion of substance is not applicable at all.



III.

By PROF. J. A. SMITH.

IN my contribution to this discussion I must be brief, for I had unconscionably postponed making acquaintance with Dr. Broad's doctrine, so to speak, *in situ*. When I did so I found, as indeed I expected, that Prof. Dawes Hicks had furnished us with a re-statement of it which could be relied upon as a text for our examination of it. In fact, he has supplied, at any rate myself, with a view of its wider context in Dr. Broad's thinking with which perhaps I could not and certainly not so authoritatively or helpfully have supplied myself. This I say in gratitude to him without any reflection on either the candour or the expository skill of Dr. Broad himself.

In Dr. Broad's work the doctrine is presented within a chapter entitled "Empirical Evidence for Human Survival," itself a chapter with a section D headed "Alleged Evidence for Human Survival of Bodily Death." The doctrine is there offered to us as an account of the nature of what may be taken to survive or to be capable of surviving, on the hypothesis that such survival has been found to fit the evidence at our command, and especially as accounting for "certain reasonably well-established super-normal phenomena." What, in detail, such phenomena are, and in what degree they can be said to be "established" (*i.e.*, what "reasonably well" means), he does not discuss, but assumes in his readers a general acquaintance with them and a participation by his readers with himself in something like the same measure of confidence in their existence as he feels. This confidence has to him the same basis as that on which he accepts the genuineness of "the rarer and obscurer kinds of physical and medical phenomena." He declares himself "quite unmoved" by the objections of certain anonymous critics who, as self-appointed spokesmen of "science," reject what he accepts, and in general disables the judgment of all (?) who deny what he here

advances. He has always found that such critics have either failed to read the relevant literature with care, or have not sufficiently verified it by careful investigations made by themselves, or have not realized the superior qualifications to be heard of certain witnesses whose first-hand investigations guarantee the genuineness of a large part of such phenomena, or are guilty of all these defects and delinquencies together. I do not think that I have any prejudice against the admission of any phenomena or data merely because they are "rare" or, at any rate in some sense of the word, "obscure," or even "abnormal." On the other hand, I confess to what may be called a prejudice that the evidence for the truth on matters of deep and serious concern to human life is not likely to lie in such quarters, but rather to be writ large all over our normal experience, escaping our notice rather because of that than because it is written microscopically in some exceptional passages of it. At any rate, if I understand the position of those who, like Dr. Broad, deny to me a *locus standi* in the controversy, they could not but allow that the evidence is presented to us then and there *also*; only, so they argue, it cannot there be read except by those who have first accustomed themselves to read it first in the minuscule letters of the infrequent and, if obscure, yet illuminating, *obiter dicta*, or of authoritative glosses upon the difficult text. Like Prof. Dawes Hicks I am, whether justifiably or not, unconvinced that the alleged phenomena are as well established, or so confidently to be relied upon as evidence, as Dr. Broad claims that they are. And so I can only (again like Prof. Dawes Hicks) here suspend criticism, and "for the purpose of the present discussion," and provisionally assume that Dr. Broad is right in his view of their authenticity and evidential value. The phenomena in question are by him appealed to as evidence—and sufficient evidence—for the survival, after the dissolution or disintegration of the living man, or of his body, of something or other which during his life formed part of his

being. That anything does so is itself confessedly an hypothesis ; what in that case it is is a matter for further conjecture or hypothesis. But, so I gather, unless it is, in spite of death, still " human " its survival is of little interest or moment to us. And what precisely is meant by this requirement is by no means clear, but at any rate it would not be satisfied by the continuance after death of influences or effects initiated in life or by such survival in the memories or imaginations of other subsequent living men as, *e.g.*, Samuel Butler found enough to satisfy him. It is not merely that such a survival seems so plainly destined to fade out and come to an end, but that, while it continues, it does not appear such as still or at all to constitute a human being ; for that it is too diffused, lacking in concentration, independence and initiative. This further hypothesis or postulate we express by saying that what survives must be something substantial, or a substance, something individual, compact, self-contained, a self-maintaining and original source of self-initiated and self-controlled activities. Otherwise its continuance is as good as no survival at all. Once embarked on this course of what would satisfy us as genuine survival of what had been the whole or a principal part of the living man, we come in the end to demand, so to speak, that it shall be a " person " and the same person as had been during life. Our whole course of investigation, study and estimation of whatever evidence we have or can get at is actuated, started and maintained, to discover whether or no in the evidence there are good grounds for supposing that it is so or not.

Now for myself I am bound to confess that in this enquiry, conducted with this aim, I am without any very lively interest. I have failed to picture to myself, to imagine, or to think out and conceive any form of endlessly continued " personal " existence which appears to me either desirable or worthy of eternal preservation. Such personal existence as I ascribe to myself now seems

to me as I know it clearly *not* such, and I can only take it to be capable of bearing such by a transmutation of it which I cannot in imagination or thought, or by any way of anticipation, bring before myself, and I find no profit either theoretical or practical in speculating about it. Hence, I have resolved to refrain from all eschatology or, where and when I cannot resist it, to accompany the indulgence in it with a perpetual reminder of its irremediably mythological character, and thus to acquiesce in, or welcome and dwell upon it only when its claim to truth is abandoned and its acceptability rested on its beauty or sublimity—its character as a work of art.

Dr. Broad's doctrine here also refrains from so long a view ; it, too, insists on the fulfilment of no such large and difficult a demand as is implicitly contained in the belief in "personal" immortality. At least I think not. But he does suppose, and thinks he has in the phenomena good grounds for supposing, that what probably survives death is "a mind," a mind continuous or at least homogeneous with the minds which we know, or rightly suppose, to be in us, whether as part of our being or as pervading it throughout, while we are still alive. In both its states or periods of its existence it is the same *sort* of thing, and to that death makes no difference, no essential or substantial difference. In the one and the other state it is equally and alike a substance. That, I take it, he is assured, and assures us that beyond question it is, and must, if it survives, continue to be. Perhaps so far its nature may be said to consist in its being a structure deeply and firmly characterized by at least three attributes: (1) stability, (2) causativeness or originativeness, and (3) one or other of a number of specific attributes, each of which determines its possessor to be a special kind of substance. The first two it shares with material or corporeal substances (though perhaps with a difference), but the third, which in its case is "mentality," separates it from them and from all other kinds of substances whatsoever. In

respect of this last character, there is a difference between the case of what has this distinctive quality and that of all other substances which have the qualities co-ordinate with that, for in their case the differentiating quality may be regarded as wholly dependent on, emerging from or supervening upon, some determinate collocation or mingling of the qualities of its constituent parts, but in the case of a mental substance, or shortly a "mind," this, in view of certain phenomena which it exhibits, cannot be maintained. The "mentality" of or belonging to a mental substance is itself not merely a "substantial attribute"; *it is itself a substance*, at once itself a substance, and at the same time temporarily of or in another substance.

The whole situation here adunbrated has long been familiar in philosophy, for it is just a restatement of that in which the Aristotelian $\psi\acute{\upsilon}\chi\eta$ was thought to stand as being what was called an (imperfect) "substantial form," and the restatement of it in regard to "Mind" raises precisely the same problems as that did. On the one hand, the "Soul" appears to be essentially correlated with certain determinate forms of bodily structure or certain conditions or states of such, and on the other, if certain phenomena are to be accounted for, to be more and other than that, in the end so much more and so seriously other that a certain measure of independence upon that (the bodily structure) must inevitably be ascribed to it as an essential attribute of it.

The difficulty of the situation was in no way relieved by recognizing within the soul an inner soul or "mind." The problem of the mode of union between the one factor and the other was merely doubled, and the endeavours to meet it by interpolating between the extremes connecting levels or strata of an equivocal nature proved a plain failure. It was not possible to secure for any part in the structure of the living being such independence on the lower or surrounding others as at once to account for its exercise of functions through them in life and also to permit the

belief in the continuance of such exercise when they were disintegrated. I do not mean that this cannot be done, but that it cannot be done by any refurbishing of the old methods by which it was formerly attempted.

I am not going here to recall or criticise the proposals which were made to maintain such independence with their corollaries about the possibility of the soul's disembodied existence. The doctrine of the human soul's acquired and permanently retained *inclination* to its former but now dissolved body appears to me the historical anticipation of Dr. Broad's theory of "traces" and the latter to possess no increased plausibility over it. It merely repeats that the supposed separate soul or mind or psychic factor *can* remember what it did or underwent before disembodiment, and I see little or no empirical ground for believing that it can, and, if possible, still less that it can then acquire novel information or improve its powers by further exercise of them or attain any insight or understanding from which, while it is embodied, it is precluded. No, nor is there any plausible evidence of any moral advance, and, indeed, all that is even claimed in that way is a kind of progress the value of which seems to me not very high.

Upon the whole, I believe myself to be entirely at one with Prof. Dawes Hicks in the verdict which he pronounces on the value of Dr. Broad's doctrine. For all its taking account of new phenomena, it seems no better (if no worse) in his restatement of it than in the older forms of it which are familiar to me. There are, of course, novelties in Dr. Broad's version of it, but I scarcely think that they are improvements. Our present being is, no doubt, in some genuine sense a graded or stratified structure, with a very great difference between its extremes, but I find the gravest difficulty in supposing that a cut can be operated in it which will leave on either side (or is it on both sides?) a factor to which the name of "substance" can defensibly be applied. The older partitions of the doctrine of such a separation between

a soul and its body frankly characterized the results of such a division as "imperfect substances." Descartes, who made the cut so to speak higher up and only in the case of Man (between the mind and the animate organism) did indeed regard both of its results as "perfect substances," but the difficulties in which he thereby landed himself in are notorious. Despite all his efforts, he leaves the problem of their present union and co-operation (which we here and now "experience") as mysterious as he found it.

I share all Prof. Dawes Hicks' difficulties about Dr. Broad's accounts both of his bodily and his psychic factors. Like him, I fail to piece together into a coherent view what is being offered to us concerning the one and the other, a view of either which I could call a conception of either as itself a coherent whole possessing the conditions of permanence, still less of eternal duration. In particular, why is its present "bodily factor" confined to "the brain and the nervous system"? And what is the next upper layer (which is, I suppose, the lowest within the mind) in the hierarchy of our present constitution? How much is the disembodied mind supposed necessarily to carry away with it into its temporary or eternal separate existence? Mere sentience? And again, is it that with the bare possibility of a renewal of centralization, systematization, consciousness, self-consciousness, personality? Again, are we to suppose that it carries forward its acquired habits, memories, dexterities, etc., etc.? Or, lastly, are we to suppose that its dissolution of partnership with its body in no way at all affects its powers and susceptibilities? Once we admit transmigration, I do not see where we are to stop (what are the limits of "suitability"?), and the notion that organisms are merely unmental structures utilized by mental "substances" or agents appears to me as indefensible in philosophic theory as it is useless or futile in science. In a word, I fail to see how from the experience of two factors which

we always find working *together*, we can get to any conception of either working loose from or in the absence of the other.

I do not like to end without some positive suggestion, which is that nothing short of taking all reality, and therefore both factors, as mental will take us out of the wood. But I have already, perhaps too often, offered to the Society this recommendation, and I will not here develop it further than to say that it involves the contention that the so-called physical world is the creature of Mind, and bears upon it the marks of its mental origin, so that until the truth of this is recognised, and the problem restated in the light of it, it remains an insoluble problem, while, if it be so restated, it dissolves and leaves our energies free to tackle with hope real problems and fulfil important tasks. For myself, it has retreated to the world of phantoms, with which I am resolved no longer to wage unprofitable strife. What Dr. Broad calls "a mind" seems to me not a reality but a manufactured article, fabricated out of the content of experience by a violent abstraction with an almost incalculable distortion, at best a device of temporary worth and easily exhaustible utility, certainly no "substance" capable of holding itself together or standing and working loose from its environment. It is a fictitious creature, and I see as little profit to be gained from an analysis of its "composition" as there would be in developing an imaginative anatomy or physiology of a centaur. When we turn to History, to the interpretation of the content of experience as it most concerns us, the utility of such a fiction is trifling or *nil*. The assumption that there were *such* "minds," or that we were such minds, would explain nothing, or only what we might be well content (and even well advised) to leave unexplained, trivial mysteries, better ignored or forgotten, left concealed from view as in healthy waking life they are by the covering veil of unconsciousness. Not there, but out of it (having come out of it into the light) lie the highest and most precious works of Mind and the best and clearest evidences of its nature.

*Meeting of the Aristotelian Society at 21, Gower Street, London,
W. 1, on 7th June, 1926, at 8 P.M.*

XIV—THE ACTIVITY OF MIND.

By C. DELISLE BURNS.

I.

THE question proposed for discussion here is metaphysical, and not either historical or psychological. But at the risk of introducing irrelevant implications, it may be useful to suggest that it is the question as to the active intellect in Aristotle's *de Anima*, chapter V; it is the question as to "actus" in Thomas Aquinas's "De unitate animae" and "De verbo mentis"; it is the question as to the meaning of "In mente" in Ockham's Theory—"Universalis sunt in mente"; and, of course, in modern philosophy, it is the question of the activity of a class of Leibniz' monads, and of the Kantian "understanding which makes nature."

The question is—What is the chief characteristic of mental process by which it is distinguished from other kinds of realities? Or again—What difference is there between complex realities with which in some way "mind" is intermingled and such realities without "mind"? Or, if I am compelled to make it a problem in epistemological terms—What is the difference between things known and the same things (if they are the same) not known? Of all the various ways of asking the question, the last is worst. The assumptions implied in each of these questions are very great; but they are overpowering in the last form of the question, although this form has been most commonly used by philosophers since Kant.

The familiar dilemma with regard to the theory of knowledge is as follows :—If knowing an object affects or makes any difference to the object known, then the object itself cannot be known and may be assumed not to exist. On the other hand, if knowing an object makes no difference to the object known, then the mind may be assumed to be absent in knowing, since knowing can be explained as a relation between objects ; and therefore the mind may be assumed not to exist. The first limb of the dilemma is a popular way of expressing what Kant began and Hegel finished. The second limb of the dilemma may be regarded as a popular statement of what Moore began and Holt finished. Kant and Hegel between them demolished the object ; and Moore perhaps, but Holt certainly, seems to have abolished the mind. Objects in the former case are explained as relations of minds or of Mind ; and in the second case, knowing is explained as a relation between things known or within Neutral Stuff. For my present purpose it is unnecessary to distinguish Idealism and Realism respectively from Subjectivism and Objectivism. I am assuming that one may, for the purposes of a contrast, imagine that philosophers are more logical than in fact they are. The tendency of idealism is to render insignificant or non-existent the difference between imagination and perception. Imaginary objects do not seem in idealism to differ very much from hats and tables that are seen : and as for the world of facts that are not “sensed”—the world of mathematics—there seems to be no distinction at all between the realities referred to in the statement—“A chimæra has four legs” and the statement—“two and two make four.” Both such statements seem to be merely verbal ; that is to say, they are equivalent to “This is what I mean by a chimæra” and “This is what I mean by two and by four.” The tendency of extreme realism is, on the other hand, to render insignificant the distinction between an object known

and the same object not known. If things known are absolutely identical with what they are when they are not known, then the complex "things *plus* knowing" equals "things *plus* zero." I do not, of course, mean that either the idealists or the extreme realists are so foolish as to believe what their opponents would like them to believe. Clearly, there is an object of some kind even for an idealist and there is a mind of some sort even for a realist. All I intend to imply is that the characteristics of mind and of what is not mind *seem* to be explained by each philosophy in terms of what each is *not*.

II.

It is absurd to reconcile opposites. To do so would destroy much innocent pleasure; for the perception of disagreement usually creates a sense of superiority on each side. It is unkind to say, on the other hand, that a traditional opposition is unimportant; for that would destroy the occupation of most lecturers on philosophy. But clearly what is in question is the nature of mental process. We may therefore attempt to analyse the characteristics of mind without direct reference to the contrast between subjectivism and objectivism. There is a whole world of mental process. To study that world is to obtain some evidence as to the characteristics of mind; but there are books professing to deal with mind in which no mention is made of the existence of the fine Arts, of human speech, of institutions, of social co-operation, although we hear much of mysterious Latin-Teutonic complexes called "sense data." There are even books and essays about the whole of reality in which Art, Religion and Politics are referred to in a few graceful closing words. We must therefore say *how* we propose to study mind. The method is in question: and the method we shall adopt implies the following principles.

First, we shall take seriously the theory of psychologists that, in their language, conation takes precedence of cognition. That is to say, we must explain the knowing relation by reference to the doing relation. But in this sense conation (or activity) must be held to "include passive acts of sense as well as activities of volition."* Cognition is thus a sub-class, with volition, of the one genus "conation"; and the apparent passivity of the knowing relation is delusive, although it has had a long and ruinous career in philosophy, as in the "impressions" of Hume and the "presentations" of later psychology. Thus also there is no sense in speaking of the "contents" of the mind. Kant was deluded by the passivity ghost, which made the mind in "knowing" seem to be like a box or container. When Ockham says "in mente" he does not mean "inside the mind" or "within the mind," as can be seen by the contrast he makes between "in mente" and "in re." "Res" is not a place where things are; nor is "mens." Both are ways of existing. As everyone knows, Ockham said that "in re" were only particulars, whose nature was simply "number"—for there was no "principle of individuality"; and "in mente," he said, are only universals. But that can make sense only so long as "the mind" is not conceived as a box or container. The Scholastics did not imply the false metaphor because they were unconscious of the problem of the relation of knowing to what is known; but ever since the problem arose, with Descartes, the passivity metaphor has obscured the importance of conation. Now if "minding" is really conation, then the characteristic of thought-objects is like that of manufactures or of social institutions, namely, that they have in them a sign of creativeness not to be discovered outside the sphere of mind. And since conation is much more

* Alexander, *Space, Time and Deity*, vol. ii, p. 118 seq.

obvious in a social movement than in an hypothetical "sensing of a red patch," the characteristic of mind will be found much more easily in social theory than in an attempt to build up "minding" out of hypothetical elements in which sense-data are assumed to be primitive facts.

Secondly, we may seek to understand mind or mental process (doing, thinking, feeling, etc.) by reference rather to art than to science. What the French call "*objets d'art*" are not "objects" in the scientific sense nor in the sense in which Hegelians speak of "objects." It will be said that they are "products" or "products of imagination," but the marble which, in spite of Croce, is essential to the statue, is not imaginary in any sense. Philosophers have been disgracefully unaware and unappreciative of the arts. Kant composed some happy guesses in what he called a "*Critique of the Judgment*," whatever that means, but unluckily without investigation of works of music and the drama. He is said to have heard the Königsberg brass band and to have had in his room one engraving of Rousseau. But even if he was "perceptant," no one ever accused Kant of writing a drama or painting a picture. Most philosophers tend to discuss a picture as though it were something to be looked at and not something to be painted. On the other hand, Croce may be said to have forgotten that although the picture is something to be painted, the painter can generally see it. The field of experience in these matters is imperfectly explored; and the vaguest generalities have done duty for æsthetics, while physiology has been ransacked for terms which may be useful in discussing mind. I argue, therefore, that we shall discover the characteristics of mental process better by exploring the arts than by learning physiology.

Suppose one began one's system of philosophy not with the most pervasive characteristics of experience, "space-time" or any other "scientific" object, but with the first sentence one

makes in expressing the system, that is an "objet d'art," quite singular and even peculiar—surely then the character of the system would be radically altered. It will be obvious from what I have written above that I owe much to Alexander and therefore I may, without further apology, proceed to criticise him.

Suppose, then, that art were taken seriously as offering evidence for metaphysics, we should not in the final chapter of our metaphysics discover an irreducible surd, the "particulars" of everyday experience. Why should there be vast numbers of molecules of carbon or gold and oaks and men?*" "The actual multiplicity of particulars remains as a mysterious residuum," says Alexander; but that is only because a few particulars are all that a scientist needs, for he really believes that universals or pervasive characteristics are more honourable or godlike or "necessary." Kinds must differ, or how could the scientist get his living? But "we cannot see, at least I cannot," says Alexander, "why these finites should exhibit actual repetition in their kinds." The universe is so uselessly proliferous that scientists tend to favour birth-control of particulars. Not so the artist. It is irrelevant even for the appreciation of art and still more for the artist that Raphael's painting is *like* Perugino's. The artist disregards the universal. The point of interest for artistic creation is the newness or uniqueness of the "objet d'art"; and that is the point of interest for artistic appreciation. Philosophy is indeed a science and not an art: but it may be distinguished from other sciences not only in attending to more pervasive characteristics but also in being the only science which takes the particular seriously. That this molecule of carbon is not that other is just as important for philosophy as that both are carbon. The particular is just as fundamental or characteristic of the real

* Alexander, *Space, Time and Deity*, vol. ii, p. 393.

world as the universal ; and one *could* write a system which took the particular seriously, as Leibniz tried to do, until he lost heart on seeing the theological consequences. Perhaps Whitehead has succeeded with his "events" in taking the particular seriously ; but since he has written for science, he has emphasized rather the fact that events are all events rather than the fact that one is not another. In his latest work, however, he shows that philosophy has need of the evidence to be derived from artistic creation ; and I think he would agree that such evidence would be still more illuminating for discovering the characteristics of mind than it is for discovering the characteristics of what is not mind.

It is perhaps unwise to refer to the old Greek problem of the one and the many, for that may raise ghosts in our discussion ; but it should be remembered that Aristotle (*Metaphysics* XIII, ch. iv, 1078b) says that the flux of particulars in Heraclitus gave rise to the perception of the permanent "ideas" of Socrates. That there is a flux is of minor importance ; it is most important that there are particulars ; and the awareness of particulars thus gave rise to Greek philosophy. But this awareness of particulars is artistic as contrasted with scientific perception. Secondly, it is well known that nearly all the metaphors of Greek philosophy, and particularly that of the *εἶδος*, are *artistic* metaphors. Thirdly, Aristotle in the *de Anima* expressly says that the active intellect is to the passive as the art is to its material. The greatest paradox is to be found in the fact that it was Ockham who restored the particular to its proper status after the obsession of the middle ages with universals and Ockham in so doing founded science not art. But the paradox is still valid. Artistic perception is the source of science.

III.

The general conclusion with regard to the characteristics of mind would be affected by the use of the new method of investigation and the new material indicated above. In general mind is activity. The phrase "the activity of mind" therefore means "the kind of activity which is mind." I assume that the word "mind" means "minding" or mental process. But of course activity is not peculiar to mind. I accept the latest statement of the general structure of reality. In the organic theory which Whitehead explains*—"the only endurances are structures of activity" and the endurance appears to be greater in proportion to the likeness of the units or nuclei of activity. But the activity of mind would be, I suppose, a different kind of activity or it would be activity having a different kind of endurance. The peculiarity of mind would not be that it is an activity in a world of passivity but that it is an activity having a certain "pattern." "When we come to living things the pattern is recovered and the organic character again rises into prominence. Accordingly, the characteristic laws of inorganic matter are mainly the statistical averages resulting from confused aggregates. . . . If we wish to throw light upon the facts relating to organisms we must study either the individual molecules and electrons or the individual living beings."† And with regard to the contact of the individual with what is not the individual, each is mediated in its contact with the other by association in which "creative" activity modifies the environment. There is then some particular kind of activity which is mind and we proceed now to indicate its peculiar characteristics, without assuming that Whitehead would accept either the terminology or the ideas here used.

* *Science and the Modern World*, p. 158.

† *Id.* p. 162.

First, minding would be seen to be essentially a complex world of many units : it should be impossible, except for purposes of methodological abstraction, to speak of " a mind " without reference to " other " minds. The intimacy of the relation between minds should be seen to be greater than that of any other known realities ; for there is an interpenetration of a mind by other minds at all points. The relations within the different classes of factors in the universe of fact are different in character. Atoms or molecules of carbon are not related, one to the other, in the same way as one tree is related to another tree. But in no case does the relation of the members of a class form, as it were, a world in itself except in the case of mind. I am not assuming that " a mind," whatever that is, must be substance or a stable fact : " a " mind, so far as my argument is concerned, may be a certain order of a series of functionings. But if it is an orderly series, the members of the series (the state of anger, the perception of cheese, the pain of indigestion) are also members of another series which is a social unit of many minds.

If one begins with physiology, especially of the mechanistic kind, it is easy enough to forget all about language and law which are social " mindings " ; but if one begins with art (literature, architecture, etc.) one can hardly forget the contact of minds. It seems likely that philosophy, in its widest sense—the theory of whatever is real, would receive valuable evidence from the studies of social life, just as it receives valuable evidence from mathematics or the physical sciences : for, since a Trade Board is just as real as a triangle, the theory of reality may be drawn from both. But in any case the more limited section of general philosophy, which is called the philosophy of mind (contrasted with the philosophy of nature) should receive much evidence from social studies. The mind would be seen to be the sort of reality which makes togas and then discards them in favour of

trousers, which makes the Parthenon and forgets it in the aberrations of St. Pancras Station. But that reality is, in some sense, an activity and not the activity of something connected with *one* body only. The plurality of minds is not so important, for our present purpose, as the interpenetration of minds or the communication between minds: for that alone will explain art and social institutions. Now there are no such realities as art or social institutions outside the world of mind: that is what is meant by saying that they are characteristics of mind. But a few vague generalizations about order and liberty will not provide enough material for the discovery of such characteristics. It will therefore be essential for those who use the word mind in their metaphysics to know very much more of actual social life than they at present do. Mind can only be reduced to terms of what is not mind by those who are ignorant of the nature of the arts.

Again, with the new evidence, minding would seem to be essentially creative. By that is meant the initiation of reality: but in a sense all the world is creative or, as Alexander would say, Time is creative. The moment at which you read this certainly never existed at all before. But the amount of each moment or "event" (in Whitehead's sense) which, so to speak, can be found in the past, is less in proportion as the event is mental. The more of mind, the more of "emergence" in Lloyd Morgan's sense of that word: and by a rate of emergence I mean the proportion of *newness* that there is in any factor of fact. Perhaps this is what is meant by freedom when the freedom of the will is discussed. The whole world is "free" in the sense that there is real emergence of new characteristics, not to be found as such in the "cause" of the new factor: but mind is free to an extent or in a way which distinguishes it from other reals. Even seeing a red patch is, then, a creative activity rather than a "reaction

to stimulus." It is not the stimulus which moves first, for mind in a sense "creates" in having the sensation. But, of course, I do not mean that mind creates the red patch. Mind is that kind of reality which, like life, leaves a significant mark where it has passed; but the marked object is not mind, nor can the mark be identified with mind--unless there is some reality which Aristotle called the passive mind. This passive mind, however, is perhaps not the mind at all, in the sense in which I have used the term, but body or some characteristics of body. The mark where the mind has passed is not-mind. Mind, therefore, is "in" the statue only in the sense that it has passed that way and left its mark; but in the case of a known object it leaves no mark, for knowing is the act of passing that way without leaving a mark. That is why the scientist seems to be so objective and impersonal as compared with other artists.

From the comparatively simple creation of sensing to the more elaborate creation of electrons and other "objets d'art," there is a long and obscure progress. Artistic imagination comes in somewhere in the textbooks of science: but where, I am not scientific enough to say. I should seek to understand the creativeness of mind by considering the formation of this sentence rather than by discussing whether a penny is "really" round; but I mean to imply that wherever there is mind, there is also an excessive proportion of emergence or newness.

Thirdly, the activity of mind would seem to be essentially and peculiarly purposive. I do not wish to discuss what is meant by purpose; but I assume that in the sense that mind is purposive, *nothing else is*. That is to say, purpose is not to be found either in the universe at large (if anyone can find any needle in so vast a haystack) or in any section of it such as Whitehead calls actuality (contrasted with possibility). It seems to me that even Whitehead's God could not be said to have a "purpose" in any sense

in which "purpose" can be found in that limited world which is the world of mind. Lloyd Morgan's God might have a purpose, if it, or as the author says "He," existed: and Alexander's Deity or God I imagine would not venture to claim a purpose. I trust it will be understood that I am not being metaphysically abusive. To deny that purpose is to be found in a certain place is not to insult, it may be even to compliment such a place. There may be some third characteristic *other* than determinism and purpose: but purpose as we know it seems to be characteristic of mind and of mind alone.

Fourthly, knowing is characteristic of mental process. It may be a very important characteristic, but I think its importance has been greatly exaggerated among philosophers as a result of the attention given to it by philosophers. Comprehension, in Alexander's sense, may be the best description of knowing; but I confess that seems to me too static a metaphor. When knowing occurs the mind is not simply present with an object: it is artistically active. Knowing is therefore only a special case of "minding" which is social, creative and purposive. It is the coming into existence of certain realities, but certainly not of objects known: for these were in existence as a precondition of knowing. What comes into existence is similar in character to what comes into existence when the sculptor works at the statue, the architect at the building or the composer at the melody; that is not the form (for that is *in* the work of art) but the emergence of the form. The form or design may be said, as Alexander rightly maintains, to be found by the artist in the material*; but the finding is a reality and that reality is mind. In knowing, which is a peculiar art practised by scientists and philosophers, the forms found are really there to be found; but

* *Art and the Material*, p. 28.

“there” is the actual, as contrasted with the possible. The “material” which remains unchanged for the sculptor is the marble: the “material” which remains unchanged for the scientist is the actual. But in the actual is knowing and this is something other than what is known, except in so far as it also is known. This is the active intellect of Aristotle which is “like an art in respect of its material.”

Finally, it is in the activity of mind that one finds most clearly the “*flammanitia moenia mundi*.” Knowledge and artistic creation grow in a sense of that word which is more vivid than that in which it may be said that life grows. Mind is at the edge of the actual. It is almost the possible which is not actual. The whole of philosophy must be dominated by the perception that philosophy, as a science of the real, is necessarily inadequate; for the real includes the possible. Now even the actual is probably inexhaustible. There is every reason to suspect that there are actualities impinging upon us and affecting us of which we know nothing and of which we do not even unconsciously take account. But mind sometimes touches these, as is indicated in the phrase—“the reach of the intellect is greater than its grasp.” This may not be a peculiar characteristic of mind in reality; but it is the peculiarity of mind for us. An amoeba may have some other tangential experience than ours; but ours is mental. And when we pass from the actual to the possible, mind seems still more characteristically placed, for it is in regard to mind that the contrast between the necessary and the contingent is most obvious. In Leibniz’ sense of the words, all the existent is contingent, but there a special form of contingency in minds in so far as here contingency is “internal.” Even in its simplest sense, in which the contingent means “what may be otherwise,” it is in mental process that this characteristic of reality appears to be most obvious. But this is precisely the place where philosophy must cease to

explain, in the scientific sense of that word, and must simply accept: and here are the "*flammantia moenia mundi*."

Enough has now been said to indicate the kind of characteristics implied in the phrase "the activity of mind"; but it may be worth while to note some of the difficulties in the way of a metaphysics of mind. The metaphysical assumptions in ordinary psychology are even more unjustifiable than the old-fashioned assumptions of physics and chemistry. In the sciences of nature such simple-minded metaphysics is often implied that scientists are willing to accept quite cheerfully conclusions involving that they are dealing with illusions when they speak of atoms or vortices. But it is possible to have a reasonable metaphysics which, nevertheless, allows for the necessary assumptions of modern physical science. Similarly, in the sciences of mind, and particularly in psychology, there is no reason why the metaphysics implied should be nonsensical. The psychologist as such is not concerned with metaphysics; but he places difficulties in the way of good metaphysics if his governing assumptions are drawn from obsolete metaphysics. We have indeed got rid of the soul as a starting-place in psychology; but even the modern phrase "mental process" implies metaphysical assumptions and the word "behaviour" implies still more. This is not the place to examine psychological assumptions, but in order to show how far mind is misrepresented we may refer to two psychological phenomena—memory and association.

The current language still allows the psychologist to imply that a remembered object is "in" the mind in some sense in which an immediately perceived object is not. The assumption is still more alarming if not the object but an "engram" is in the "mneme"! But with another view of mind all the phenomena of memory can be explained in terms of ability to pierce through time. Thus, if I remember the omnibus in which I travelled

yesterday, I actually go back to it through the intervening events. Memory is like a ray which pierces past time as some rays of light pierce objects opaque to ordinary vision. The mind has no contents even in remembering.

Secondly, as for association—things perceived hang together of themselves. Some people can see connections, others cannot; in some moods or at some angles connections appear which are not otherwise visible. But it is not the mind which associates. The whole metaphor arises out of Locke's mistake—"general and universal belong not to the real existence of things" (Essay, bk. III, ch. III, sect. 11). Association and its so-called "laws" are silly methods of explaining how the real relations of the factors of fact are perceived; but, of course, so long as your metaphysics implies that universals are not "sensed," you will be forced to write a chapter to show how silly you were to imply it. Minding through eyes and ears gives connections. I see and hear likenesses. There are no things of sense which are not things of thought, as Heracleitus could have told Socrates. Conception is not a separate process which gets at what perception cannot find. But if you assume that the world is not what it is, you will have to write a chapter to explain how on earth you discover what it is. Indeed, mind has been misrepresented in two ways—first, it has been assumed to include characteristics which do not belong to it—witness the long controversy about "subjective" elements, which are simply differences between the two "objects," my body and your body. There is a peculiar penny which has often engaged the attention of this society—the penny which is "really" round, even when it is looked at sideways. If my "object" is my body *plus* the penny and your "object" is your body *plus* the penny, the objects differ—but not because of mind! On the other hand, mind has been misrepresented because some of its characteristics have been supposed

to belong to a universe or the universe which includes what is by hypothesis not mind. This is often done because of a certain respect which philosophers, ever since Plato, have felt for the vast and the permanent. They call it mind out of politeness. But the transitory particular seems to me quite a respectable fact ; and I do not for that reason wish to call it by a name which is most useful when its meaning is definite. The obscurity of the whole world of mind at any rate, and its unexplored state, would seem to indicate that the assumptions of psychology and the social sciences and the implications of the arts, including the scientific art, should be examined in order that the evidence as to the nature of mind might be made more useful to metaphysics.



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W.C.1, on June 21st, 1926, at 8 p.m.*

XV—IMPLICATIONS OF THE PHILOSOPHY OF BERGSON.

By F. H. CECIL BROCK.

“To love unsatisfied the world is mystery, a mystery which love satisfied seems to comprehend.”—F. H. Bradley.

As this paper has been taking form in my mind, it has grown more and more clear to me that the title is a bad one. It is bad in that it claims for the following pages more than they deserve. It seems to suggest that what follows can be logically and impersonally deduced from the written work of Bergson; or at least that it contains the solution which Bergson himself might fairly be supposed to offer to certain questions which are here considered. The first of these claims is probably one which could not be fully supported. The second would involve an acquaintance with the working of the living mind of the master; and this is a privilege that I unfortunately do not possess. But the mere unfolding of that which is already there is not the path to philosophic truth which Bergson himself recommends. If, therefore, I have presumed to set forth here what I suppose to be the lines of organic development that the thought of Bergson has followed, when planted in the soil of my own mind, I may fairly plead as my excuse that, fully conscious though I am of the imperfection of that soil, it is only by means of such organic growth that the philosopher himself holds out any hope for the discovery of truth.

To be an original thinker is to risk misunderstanding; to be original and popular is to insure it. It is scarcely likely, therefore, that the thought of the philosopher who could, by his speech,

cast a spell upon the learned and the fashionable of two European capitals should escape from misquotation, from misunderstanding and from misapplication. For some reason those philosophers who have recognized the presence of change as an important and inseparable quality of reality, have been specially subject to this misinterpretation by the people of their own age. No philosopher, not Plato himself, strove more earnestly than Heracleitus to escape from the principle of change, universally present in phenomena, which he was too honest to deny. Yet it pleased his countrymen to disregard altogether his doctrine of the λόγος and of the ὁδοί, and to hand him down to posterity as the responsible father of the irresponsible theories of Gorgias, Zeno and Protagoras. It is my contention that the fate of Bergson has been almost equally unfortunate. For not only his critics, but his admirers, following the journalistic principle of falsification by transferring emphasis, have proclaimed him as the philosopher of change or as the philosopher of vitalism; whereas the significant feature of his thought is neither change nor vitalism, but freedom.

Much of Bergson's philosophy marks him out as the voice of his age; and partly for this reason he has enjoyed so wide a popularity; and largely for this reason the most important part of his theory has received little notice and has produced little result. The nineteenth century had taken to bride a strange damsel, named Progress, whose origin was uncertain and whose destination was unknown. So soon, therefore, as it was realized that the fact of continuous movement in all things was recognized by Bergson's system, this was hailed immediately as the philosophic succession to that vague evolutionary theory and popular enthusiasm for progress which was the profundity of Herbert Spencer and the fire of the Poet Laureate.

Now the roots of misunderstanding generally are to be found in the philosopher himself. The fact that "Creative Evolution"

has attracted so much more attention than the author's other writings, and that so much space is in that book given to the theory of change and to the presence of life as the supreme principle in reality may well form the justification of those who have interpreted Bergson's philosophy in the light of these two principles. But if the importance of his earlier work be recognized, and if some attempt be made to regard his thought as a philosophic whole, it becomes apparent that neither change nor vitalism, as such, is the truly distinctive feature of the system. For vitalism has at this moment many exponents who differ widely from Bergson; and there have been other systems which can fairly claim to be called philosophies of change, but which form so strong a contrast to the theory that we are considering as to be almost contradictory of it. It is in its teleological aspect that the thought of Bergson seems to me to be unique, and by its originality, comprehensiveness and inspiration to distinguish its author as one of the great ones of the world.

It may be granted at the outset that the philosophy of Bergson is a philosophy of change or movement; but to men of common sense the most interesting things about movement are its source and its destination. It is strange, therefore, to hear Bergson spoken of, even in this Society, as if he were a legitimate successor of Heracleitus and his "Creative Evolution" a modern restatement of that Greek's philosophy of change. In reality nothing could be more distinct, more contradictory even. For the theory of Heracleitus finds that the world consists of a movement that is cyclic in form and ever returns upon itself; while that of Bergson regards reality as a movement with definite intention and purpose, proceeding by an almost rectilinear path from a known point of departure towards a discoverable destination. The picture of a man plodding earnestly forward upon a path that leads towards a goal, though that goal be a star far beyond human reach, or a city of El Dorado, which for ever recedes with the traveller's

horizon, is yet one which arouses in most people feelings of sympathy and of enthusiasm. But the figure which uses much energy in order to return where it began has been a perennial source of comic inspiration both in literature and in life. Alice and the Red Queen, running with all their might in order to remain where they are, form the very essence of the ludicrous and the ridiculous. The familiar story of the old lady who, trying vainly at every station to alight backwards from a Metropolitan train, was pushed once more into the carriage by a helpful guard, and spent the whole day travelling round and round the Inner Circle still makes us smile; but when the old lady is magnified into a universe and a day increased to an eternity, one begins to realize that what is a joke upon a small scale may be the very spring of tragedy and the groundwork of despair, when it encompasses all things. It must have been some such conviction of the futile business of life which called forth from Macbeth the words of despair:—

Life is a tale
Told by an idiot, full of sound and fury,
Signifying nothing.

Scarcely more hopeful, and scarcely more comparable with the work of our author, is the philosophy of Creative Evolution in the hands of Mr. Bernard Shaw. To him the Life Force is a being of vast energy and speculative interests, whose function seems to be to try experiments which prove on the whole unsuccessful, and which a sanguine humanity must hope will enable him to do better in the future. Humanity—which is the experiment—must, however, be content to face lives of extreme discomfort and final annihilation for this doubtless estimable purpose. “I do not call a Salvationist really saved,” he says, “until he is ready to lie down cheerfully on the scrap-heap, having paid scot and lot and something over, and let his eternal

life pass on to renew its youth in the battalions of the future." No doubt the battalions of the future will also do good service by adding to the scrap-heap.

These two theories should be enough to show that, though Bergson's thought may truthfully be called a philosophy of change or of vitalism, yet change and vitalism do not form any adequate *differentia*, which will make clear to us the special features of his system. In spite of the passage of years and the consequent change in the connotation of terms, I know of no more revealing test to which a philosophy can be put than that of seeking the answer which it has to offer to the problem of Aristotle's four causes. When we have discovered what it is in any new system which corresponds to the material, formal efficient, and final causes of Aristotle's analysis, we shall be in a better position to judge of the value of the thought. So far, then, as the words correspond, I would analyse Bergson's reading of the Universe as follows:—(a) The material cause is movement or change; (b) the efficient cause is the Spirit of Life; (c) the formal cause is individuality; (d) the final cause is freedom. For the movement of which we are here told is a purposeful movement, a movement which is teleological in character. If there be then an aim or an end in any process, it is obvious that it will be that aim which will give quality and character to the whole. Again the words of Aristotle are approved: *ὀρίζεται γὰρ πάντα τῷ τέλει*. The aim of my paper is, then, to show what is the effect of applying to the process, which is the Universe, the conception of freedom as an end with which Bergson supplies us.

The world of experience is a movement—a movement which proceeds, which makes real progress, in that it advances, if not from a point, at least from a direction, if not towards a point, at least *in* a direction. Now the direction from which this movement comes is a state of determinism, of geometrical and logical

immobility. Such a state is never found in the real world, for that world is by hypothesis movement. This state is one which belongs neither to things spiritual nor to things material; it is a conception of spatial extension to which geometrical causation is truly applicable. It is of such a world that pure geometers tell us. Here all things are given; there is no change, growth or progress. Understanding is the mere unfolding of those properties which are already present in the nature of space itself. "The very movement,"* says Bergson, "by which we draw the circumference of a circle on a sheet of paper generates all the mathematical properties of this figure; in this sense an unlimited number of theorems can be said to pre-exist within the definition." From this state of complete immobility and complete determinism the Spirit of Life is leading us. For to Bergson the supreme untruth of philosophy is the famous saying: *ὁ θεὸς γεωμετερεῖ*.

The universe, then, as we know it, is a movement away from this imagined state, and the phenomena which emerge in the course of the movement may be taken to mark its stages. They are matter, life, consciousness, free spirit.

As the universe passes away from that imaginary or "limit" condition of immobility and geometrical causation, it enters a phase of existence which gives rise to the phenomena of matter. The precise position which the material world occupies between the limits of determined immobility and the freedom of the spirit is not defined with complete clearness. Matter is a phenomenon of movement, in its true nature continuous, indivisible and one. The movement of matter is, however, a neutralized and balanced movement of action and reaction, perfectly equated, which gives no resultant, and so produces no real change or creation.

* *Time and Free Will* (Eng. Trans.), p. 204.

"Absolute necessity,"* says Bergson, "would be represented by a perfect equivalence of successive moments of duration, each to each. Is it so with the duration of the material universe? . . . We have supposed that it is really so."

Yet because the nature of inanimate matter differs from that of living matter only in the fact of the equation of the moments of its duration and the consequent absence of resultant, he feels that we can fairly regard the seeds of life as already present in inanimate matter. †"Only one hypothesis then remains possible, namely, that movement, capable, like consciousness, of prolonging its past into its present, capable, by repeating itself, of engendering sensible qualities, already possesses something akin to consciousness, something akin to sensation." And, again, "This nature might be regarded as a neutralized and consequently a latent consciousness."

The appearance of organic life owes its origin to the development in certain portions of the material universe of a principle of selective response to stimulus. Every part of the inanimate world is related to every other part at all points. Every side and feature of a material object influences every side and feature of all other objects in the world. Life arises when certain material objects begin to select some aspects and some influences only of other objects as being of probable use to themselves, and predispose themselves in certain selected ways to act upon such objects, always with a view to utility. It will be noted that for the beginnings of this process individual consciousness is not necessary. The phenomenon is merely one which reveals an extension of the action of inorganic substances upon each other, such as the selective seeking out of bases by acids, when these are mixed with other substances. The distinguishing feature is that

* *Matter and Memory* (Eng. Trans.), p. 330.

† *Matter and Memory* (Eng. Trans.), p. 329.

the selection is made in accordance with the principle of utility or profit for the selecting organism. The resulting phenomena are of course familiarly spoken of by a certain school of psychologists under the title of tropisms.

It would be greatly to over-state the evidence if we were to assert that the tree, which turns towards the sun for light and warmth, has in itself any consciousness of aim or of selection. The fact, however, that only certain aspects of the external world have the effect of arousing this special response in vegetable organisms and that these aspects are always those which may fairly be supposed to subserve the profit of the organism, may well be taken as an indication that here the Spirit of Life is at work. The effect of the relationship is that there is set up in the organism certain movements or predispositions to movement which tend to issue in actions likely to be of benefit to the creature concerned. It is as the internal or conscious side of this sensori-motor activity that perception arises. From this fact two important corollaries immediately proceed. It is obvious that, if this be adopted as a true statement of the facts, perception, by the history of its growth, is seen to be a relationship between consciousness and certain aspects alone of the outer world. Perception, in other words, is not the unconditional exposure of a sensitive surface to all the influences of the outer world ; but rather the exposure of a surface which is already protected by screens from the influence of any rays except those which serve a special purpose. And the purpose so served is the maintenance and extension of the life of the organism. It is true that pure perception, of which we have been speaking, is said never to be present in unmixed form in human experience. By the time that the organism has developed to the human stage (and probably long before) the process of perception has become a conscious process and has in consequence been complicated by the spiritual element of memory. But although in the end this may do much

to redeem the process from automatism, and to some extent and in some cases to introduce true freedom of choice among the many possible lines of motor adjustment which lie open. it will not change the fact that that which we call the intellect is built upon a pre-conscious tendency to select only certain aspects of reality for consideration, and is directed primarily towards the adjustment of the body for certain actions to be performed upon the outer world with a view to the profit of the organism.

The brilliant account of the growth of the intellect which Bergson gives us is so well known and so arresting that it would be merely wearisome for me to attempt to resume it here. It will be enough if I emphasize one or two of the points which he there makes with special reference to the argument that I am now developing. The process in the course of which the intellect was developed is one whose interest in reality was partial and wholly utilitarian in aim before it became a conscious process and an activity of the individual consciousness. For this reason we may expect to find that the attitude of the human mind to reality in the intellectual process is one which, from its inception, will be coloured by these two facts : (a) that it is interested in certain features of reality only ; (b) that its aims are primarily utilitarian, viz., the maintenance and extension of the life of the organism. The simplification of the world which the intellect carries out ; the stretching of the fine web of infinitely divisible space beneath the qualitative extensity of the material universe ; the projection of the reality of duration so difficult to manipulate, into the more convenient form of spatial extension ; the desire for the division of the world into solids, or at least into objects of finite extension, that it may be more amenable to exploitation in the interests of the organism ; all these we need not at the moment consider in detail. What emerges from these studies that is of value to our argument may be summed up under three headings, which I propose now to consider : (1) that the intellect is not a part or

faculty of mind, but a method ; (2) that intellectual method is one which by its hypotheses prejudges the question of freedom and determinism ; (3) that in consequence the intellectual method can never reveal to us a reality that is free ; but that, because it is only a method, it can be supplemented by others, and that to discover these is the work of philosophy.

The distinction between a method and a part or faculty may seem at first sight to be verbal and unimportant ; but it contains within it the difference between a new statement of the philosophy of scepticism and a call to effort that is difficult, but clearly attainable : to develop a fresh instrument of knowledge which shall lead us to reality itself. One of the most difficult facts for the ungeographical mind to realise is that roads are not physical features in a map, a country or a landscape : that they are not gifts of nature and that they might well have been built between other points and in quite other directions. A method is, at least etymologically, a road ; and though I have already admitted that the intellectual path of approach to knowledge is ancient in the history of mind and in its foundations may even precede the emergence of consciousness, yet I would emphasize the fact that the bending of the spiritual powers of man to follow the very closely circumscribed path of intellectual progress is a chosen and purposeful process, in which man has elected to subordinate his full capacity for grasping reality to the needs of practical utility.

Now in this matter of the attempt to grasp reality, as in much else to-day, men would do well to admit that they have missed their way ; and that the wisest course would be, like sensible travellers, to retrace their steps until they come to the beginning of that other road which, Bergson tells us, will lead to reality and will open up to men the possibility of grasping freedom and life. Few people still seem to be convinced of the impossibility of obtaining true knowledge of reality by intellectual means, and

the attempt goes on to use the scientific method in order to interpret life, notably in the so-called science of psychology.

Man is not only incapable of grasping by intellectual method a world which is developing and growing into freedom, but he is prevented at the outset from logically believing in the possibility of such a world. The first law of logic, that A is A, substitutes at once a static object for a developing process and denies thereafter the possibility of admitting such process to logical consideration. What is commonly known as scientific explanation of a phenomenon takes one of two forms : either the phenomenon is divided up into parts, the sum of which is supposed to represent it, or the circumstances which precede the phenomenon are presented with as much completeness as is possible and the fact which follows is then believed to be understood. A moment's careful thought will show that this is a method which prejudges the issue. If a whole can always be fairly described as a sum of its parts ; if a phenomenon must always be regarded as fully conditioned by what precedes it ; and if these are the only two available methods by which the mind can grasp the essence of a complex reality, then either the phenomena which surround us are wholly determined or they form a world which is incomprehensible to our minds. The recurrence of this absurd, almost insane, dilemma age after age in the history of thought ; the regularity with which the monster of determinism raises its head in the speculations of men, a monster, which, if it were once allowed to exist, would devour all the offspring of human understanding and of human effort, and which is in consequence so incredible to commonsense that no human being has yet been found (whatever he may say) to act as if he believed in it, these are facts which need explanation. Yet the exponents of the doctrine of determinism have been in many cases intellectual giants, outstanding and fearless thinkers in their generation. It remains to Bergson to point out that, so long as man adheres to the method of the intellect as the

instrument of philosophic disputation, so long must a belief in freedom be the result either of feebleness of ratiocination or the conscious adoption of the doctrine: *credo quia impossibile*. The cause of this noteworthy fact, then, of the continual reappearance of the doctrine of determinism lies not in the insanity of the Universe, nor in the contrariety of the human mind, but in the fact that the path of approach will allow of no other result. To throw double sixes five times in succession would be little short of a miracle; but if the dice are loaded the wonder is a little tempered.

In no publication which I have recently read have the two facts of the selective action of intellect and the purposeful subordination therein of knowledge to practical expediency been more discreetly emphasized than in the presidential address given to this Society last year by the Master of Balliol. The title which he chose for his paper was "What Does the Mind Construct?" It occurred to me that he might have called it with equal aptness "The Intellectual Process," or "The Intellectual Method," for it was of the operations of the intellect that he seemed to me to be speaking. He states the difficulty as follows: "In knowing we are faced with a reality which we not only do not make, but which our knowing does not alter. . . . What is made, therefore, and what is known by the aid of that making must be different. The construct is neither the knower nor his object. It is a *tertium quid*." This *tertium quid* he goes on with much aptness to compare to the map by means of which we study certain features of a country. "The correspondence between the map and the country . . . is not and cannot be a complete correspondence. It is a correspondence within the limits laid down by the purpose of the map." "In all such construction there is an element of choice and selection, which has been made one way and might have been made in another, certain rules of the game, and yet by means of such constructs

we represent and are enabled to understand realities which we have had no hand in constructing."

As a statement of the intellectual method of acquiring knowledge, with its practical aims and its careful circumscription of those aspects of reality which interest, this seems to me to be both true and remarkably illuminating. But if this path of map-construction, this approach by means of the *tertium quid*, be regarded as the mind's sole means of gaining knowledge, then, I think, we are left with the unsolved problem of how errors in the map can ever be rectified. If we are to construct a map which is to help us to study reality in certain aspects that at the moment interest us, it is obvious that we must be capable of some direct contact with reality, first in order that we may be able to abstract from the unanalyzed whole the parts which we are to include in our map, and secondly, in order that we may be able to compare our map, as we construct it, with the reality which it represents. For both these purposes it is necessary that a direct knowledge should exist, though it may readily be admitted and is essentially true that, until the maps have been constructed, this direct knowledge remains unanalyzed and intellectually inexpressible. That philosophy should return to this unanalyzed knowledge of the whole and seek to discover a method of developing contact with reality which shall not proceed by selecting aspects or by subordinating knowledge to expediency is for Bergson the only hope for the discovery of truth. * "We must," he says, "break with scientific habits . . . we must do violence to the mind, go counter to the natural bent of the intellect. But that is just the function of philosophy." Indeed, he would go further and would maintain that the source of nearly all our antinomies and perplexities lies in the initial postulates of the intellect. † "It may be urged against this method (of

* *Creative Evolution* (Eng. Trans.), p. 31.

† *Matter and Memory* (Eng. Trans.), p. 245.

intuition) that it arbitrarily attributes a privileged value to immediate knowledge. But what reasons should we have for doubting any knowledge . . . but for the difficulties . . . which reflexion discovers ? And would not immediate knowledge find in itself its justification and proof, if we could show that these difficulties . . . are mainly the result of the symbolic diagrams which cover it up ? ”

Up to the present we have been concerned with the inquiry as to what are the points at which the intellect fails us in our efforts to find contact with reality and what there is in the growth and method of intellectual activity to account for this failure. It remains to ask what is the characteristic of reality which compels the intellect to remain for ever a spectator and an outsider ; and what should be the method and the aim of a philosophy which is to find the contact with this reality which we have been seeking. It must be a matter of universal regret that circumstances have prevented the great philosopher from adding that further volume upon an intuitional method for which the world has been hoping ; but there are some indications at least in his writings of the lines by which other and lesser men may proceed.

The world, of which Bergson tells us, is one in which the change that is continually being manifested is not an apparent change only, like those which physical science describes, nor a circular and recurrent change which ends where it began, but a creative process. This implies no less than that each portion of such a change is an abiding fact in the history of living reality ; it is unique in quality, because it enters into a duration that is lived, which can in consequence never be repeated and never can be un-lived. The history of this change is the history of the growing life of the world : a progress from the deadness of determined space to the free life of the spirit. It is, therefore, of importance to study what is revealed of the purpose of the Spirit of Life in that portion of the evolutionary process which is revealed to us.

What is this spiritual freedom which is the aim of the process and in what way does its development take place? Alive to the folly of attempting to give a definition, which must be external and analytic, of freedom, which being proper to the spirit, can be grasped only by living from within, Bergson contents himself with saying: "Freedom is the relation of the concrete self to the act which it performs. This relation is indefinable." While accepting the wisdom of this conclusion and carefully abstaining from any attempt to confine a living process within the limits of a dead and static formula, one may be allowed at least to draw attention to certain facts which attend the growth of freedom. The growth of freedom is a transition from an imagined world of geometrical space, where all laws are of universal application (because all is homogeneous, non-qualitative and static) through conditions where the laws of action are applicable to smaller and smaller groups of objects, until in a world of true freedom every member obeys no law but the law of his own being. This quality of freedom Bergson himself states: **"In a word, if it is agreed to call every act free which springs from the self and from the self alone, the act which bears the mark of our personality is truly free, for our self alone will lay claim to its paternity."* Now ~~other~~ fact that the world, as it exists at the moment, reveals to us certain parts, viz., crude inorganic substances, which are not far removed from the condition of complete determinism; and that other parts—highly developed human personalities—have gone far along the path to complete freedom, is an immediate indication that it is not of the growing freedom of the Universe as a whole that Bergson is speaking. Indeed, an examination of the activities of these two portions of reality reveals the fact that, when we speak of a thing as determined in its operations, we mean that its changes are carried on in accordance with laws

* *Time and Free Will* (Eng. Trans.), pp. 172-3.

which it shares with a large number of things of the same kind. As life develops and organisms show an increasing degree of freedom, they are subject to laws which are applicable to fewer and fewer of their fellow creatures, until at the moment when man is captain of his soul, he acts in accordance with a law which springs from within and is applicable to himself alone. If, then, we mean by the Universe all that exists and if with Bergson we regard it as really enduring, it is meaningless to speak of this as determined; for with what else does it share the laws of its operations? And as its duration is a real duration of a life spirit, how can it be subject to any law of rhythmic recurrence, since every experience is unique? Neither then by a law which binds it to other things (for there are no other things), nor by a law which enforces repetition in time (for repetition in a real duration is impossible) can the life of the whole be regarded as determined. The process of growing freedom, therefore, which we see about us, advances not as a whole, but towards centres of indetermination. The work of the Spirit of Life cannot be regarded, upon the basis of Bergson's thought, as a series of experimental manifestations of itself in its effort to attain to freedom. The individual organisms which emerge as the result of the evolutionary process are not mere incarnations of the Life Spirit; still less are they mechanically created by it. The fact is an organic and a psychic fact, and the metaphor must be an organic and a psychic metaphor. The Spirit of Life begets individual beings that grow out of his substance and yet are not he. No freedom in the complete sense of which Bergson speaks is conceivable, save in beings that are individual, detached personalities. The office of parenthood is among men a self-denying office, and it is no less in this great history of the Life Spirit. For that which is free can be subject to no law imposed from without, not even to the law of that which created it. "The only question is," says Bergson, "whether living beings

must not rather be compared to that natural system which is the whole Universe."

Not many months ago I heard Bergson called, in this Society, a monist. The word is, of course, capable of many meanings, widely diverse in their application. If Bergson is to be regarded as a teleological monist (I apologise for the phrase), his monism is of a new kind, a kind which must somehow be reconciled with individual freedom. Nor is such a system inconceivable where choice is free, but where wisdom governs all things. There is a harmony of which the base may perhaps be discernible by human vision, possible among free beings, parent and offspring, that may be held to constitute a monism when life itself is more fully understood.

Our final inquiry is concerned with the attempt to cast some light upon the question of what is the path to knowledge which is capable of leading the mind into contact with that which is living. It is apparent from what has just been said that the living may be regarded as falling into two classes; and these, as Bergson has said, are closely comparable the one to the other. They are "that natural system which is the whole Universe" and those separate living organisms which display at least some beginnings of consciousness and free activity. We have seen that the impediment which prevents the intellectual method from giving us a real contact with life is that from its earliest dawn it is definitely dedicated to the work of manipulating Nature for the profit of the organism. This leads at once to the assumption of an external attitude. No one who is fattening cattle for the table can afford to allow his mind to dwell upon the internal and conscious life of the animals. Such an interest is irrelevant and will soon prove positively obstructive of the practical aim in view. For ease in manipulation the ignoring of real change, of growth, of freedom is a necessary precaution. Once this has been accomplished the pathway to the analytic method is clear. If we are

to find real contact with living reality, "we must break with scientific habits—we must do violence to the mind, go counter to the natural bent of the intellect." Our approach to the understanding of a living process must be from within; learning must come not by analyzing an object, but by living a life through the power of imagination and sympathy. To apprehend in its true nature the vital movement one must be within it, grasping its duration by experience from within. To attempt to grasp it from without is to reduce experience to a geometrical diagram and movement to a static line.

To develop an intuitional method will be no doubt the work of centuries; but the first step in the task is marked out for us by that which we have to undo. It is the attitude of making profit, of exploiting, of subordinating reality to our own ends which has robbed our minds of the power of seeing life whole. The philosophy of the future must build up a new sense of value. It must abandon the present, deeply-rooted tendency to limit value to that which is useful to the self, and by cultivating the ability to enter into the living experience of other creatures and of the Spirit of Life itself, set up a new attitude of mind which deals freely with the conception of an absolute value. To perform the simplest of truly spiritual acts, "to call up the past in the form of an image, we must be able to withdraw ourselves from the action of the moment, we must," says Bergson, "have the power to value the useless."

Although this is perhaps a new attitude for philosophy, at least for modern philosophy, yet it is a method which has been practised by a quite different class of people in the past. To regard sheep as potential mutton is not the only way in which to regard them; fish may seem to some people to have a value apart from their flavour; even flowers may, from one point of view, be held to transcend their decorative and fragrant usefulness. There have been men who have withstood the tendency of

their day enough to believe that these living things are fitly treated as of worth in themselves, and they have adapted their conduct to their belief. It is true that as a rule their contemporaries have regarded them as madmen and sometimes have behaved in accordance with their opinion. But that is no more than one might expect from what has already been said about the history of man's intelligence. The noteworthy fact is, however, that succeeding generations have often had occasion to reverse these opinions, and have hailed such people as sages and as saints, not, it is to be feared, because of their addiction to preaching to flowers and to fishes, but because of an undeniable capacity, revealed amid their eccentricity, for wise conduct and wise counsel in the affairs of men. Their insane attitude towards life seems to have given them a power in dealing with the lives of men which is seen in the long run to possess quite unexpected wisdom.

From time to time one has the privilege of meeting craftsmen who have a special attitude towards the material in which they work. Their main aim is to avoid doing violence to the natural tendency of such material. They treat it with a deference and a sensibility which will often make practical men smile. They seem to regard themselves and their material as co-operators, as fellow-labourers rather than as man and thing. The fancy is, of course, absurd and can never be intelligently regarded as more than a metaphor. But it is such men who usually possess an almost uncanny power of producing things of beauty, in which form and matter are strangely at one. The fact is worthy of note.

In the relation of man and man the question need not be laboured. A single meeting with one of those people who regard other men, not as means for accomplishing purposes, but as ends of worth in themselves, is enough to assure most of us that these are the minds to which we must look, not only for knowledge of

mankind, but for a strange potency in dealing with their fellows which makes for growth and moral development.

One could scarcely leave this subject without a reference to the conviction of the poet, Wordsworth. That knowledge of the reality of the Spirit of Life that is in all things, acquired, as he is never tired of repeating, not by analysis and dissection, but by close and living contact with Nature, not only dominated his philosophy, but was his inspiration as a poet and directed his choice of subject and his method of treatment. It was this that taught him to despise nothing and to decorate nothing. It was to this that he turned to regain moral and mental health in hours and years of despondency. "This will never do," was the notorious utterance of his early critic. "In order to pay you that tribute of respect which is justly due to the first of living poets," are the words of Sir Robert Peel thirty years later. Success, late but undeniable, followed a discipleship which forsook all else.

It is not the least of the achievements of Henri Bergson that he provides us not only with a theory, but with a vision: a vision of a world in which the mind is emancipated from a bondage inherited from the material organism, in which, seeking no longer to subordinate all things to itself, it enters into a relationship of noble companionship with other spirits and with the Spirit of the Universe. The man who seeks to know another soul by entering into his life is not far removed from the theological virtue of love; and delight in another being, not for his utility, but for himself, is the very source of joy. This is the true life of the spirit; and in philosophy, as in theology, the fruits of the spirit are love and joy.

**ABSTRACT OF THE MINUTES OF THE PROCEEDINGS
OF THE ARISTOTELIAN SOCIETY FOR THE FORTY-
SEVENTH SESSION, 1925-1926.**

THE meetings of the Session were held in the Conference Hall of the University of London Club, Gower Street, London, on Monday evenings at 8 p.m.

November 2nd, 1925.—Prof. J. A. Smith, President, in the Chair. The President delivered the Inaugural Address: "The Issue between Monism and Pluralism." Discussion: Mr. Joad, Sir Francis Younghusband, Prof. Wenley, Dr. Thomas, Prof. Lovejoy, Mr. Hannay, Miss Stebbing, Mr. Mead.

November 16th, 1926.—Prof. J. A. Smith, President, in the Chair. Dr. L. A. Reid: "The Nature of Beauty." Discussion: Prof. Smith, Mr. Ainslie, Miss Stebbing, Mr. Hannay, Mr. Nott.

December 7th, 1925.—Miss L. S. Stebbing in the Chair. Mr. C. R. Morris: "Judgment as the Fundamental Act in Knowledge." Discussion: Miss Stebbing, Dr. Schiller, Prof. Lovejoy, Mr. Hannay, Mr. Cecil Brock, Dr. Thomas, Mr. Cator, Mr. Nott, Dr. Castaner, Mr. Mead, Miss Whetnall.

December 14th, 1925.—Prof. J. A. Smith, President, in the Chair. Prof. J. L. Stocks: "The Unity of Thought." Discussion: Prof. Smith, Dr. Schiller, Miss Oakeley, Mr. Brigstocke, Mr. Hannay, Dr. Thomas, Dr. Jessie White, Mr. Mead, Mr. Cator, Dr. Castaner.

January 4th, 1926.—Dr. F. W. Thomas in the Chair. Mr. C. A. Richardson: "Time and its Relation to Unconsciousness." Discussion: Dr. Thomas, Prof. Wolf, Miss Sinclair, Mr. Harley, Dr. Goldsbrough, Mr. Hannay, Mr. Mead, Mr. Cecil Brock, Mr. Brigstocke.

January 18th, 1926.—Prof. J. A. Smith, President, in the Chair. Dr. F. W. Thomas: "Existence and Conventional Existence." Discussion: Prof. Smith, Mr. Joad, Mr. Mead, Mr. Cator, Mr. Hannay, Mr. Nott, Mrs. Hodson, Dr. Jessie White.

February 1st, 1926.—Prof. J. A. Smith, President, in the Chair. Prof. G. C. Field: "Ancient Philosophy and Modern Science." Discussion: Prof. Smith, Dr. Singer, Mr. Hannay, Mr. Cator, Dr. Goldsbrough, Mr. Ionides, Dr. Ray, Miss Stebbing, Mr. Morant, Prof. Lovejoy.

February 15th, 1926.—Prof. J. A. Smith, President, in the Chair. Mr. R. G. Collingwood: "Some Perplexities about Time." Discussion: Prof. Smith, Miss Stebbing, Mr. Rostrevor Hamilton, Mr. Brock, Dr. Jessie White, Mr. Holban, Mr. Hanson, Dr. Goldsbrough, Mr. Hannay, Dr. Castaner, Mr. Nott.

March 1st, 1926.—Prof. J. A. Smith, President, in the Chair. Mr. G. D. H. Cole: "Loyalties." Discussion: Prof. Smith, Mr. Harley, Miss Oakeley, Dr. Thomas, Mrs. Duddington, Mr. Mead, Mr. Child, Mr. Hannay, Dr. Goldsbrough, Mr. Nott.

March 22nd, 1926.—Miss Hilda Oakeley in the Chair. Mr. I. Levine: "Naturalism and Values." Discussion: Miss Oakeley, Mr. Joad, Dr. Thomas, Mr. Mead, Mr. Hannay, Dr. Jessie White, Mr. Nott, Mr. Morant, Mr. Cecil Brock.

April 19th, 1926.—Miss Hilda Oakeley in the Chair. Dr. C. D. Broad: "Kant's First and Second Analogies of Experience."

Discussion : Miss Oakeley, Mr. Harley, Mr. Hannay, Prof. Lovejoy, Mr. Cator, Mr. Nott, Dr. Jessie White, Mrs. Hodson.

May 3rd, 1926.—Prof. J. A. Smith, President, in the Chair. Prof. Heath being unavoidably absent owing to the general strike, the Hon. Secretary read his paper on “Objectivity in Science.” Discussion : Prof. Smith, Mr. Joad, Mr. Hannay, Prof. Dawes Hicks, Miss Stebbing, Mr. Mead, Dr. Thomas.

May 31st, 1926.—Prof. J. A. Smith, President, in the Chair. Symposium : “Is the Mind a Compound Substance ?” Prof. Dawes Hicks, Dr. Drever (whose paper was read by the Hon. Secretary), Prof. J. A. Smith. Discussion : Mr. Mead, Miss Edgell, Prof. Lovejoy, Mr. Joad, Sir Leslie Mackenzie, Miss Oakeley.

June 7th, 1926.—Prof. J. A. Smith, President, in the Chair. Dr. C. Delisle Burns : “The Activity of Mind.” Discussion : Prof. Smith, Dr. Thomas, Mr. Hannay, Miss Stebbing, Mr. Joad, Mr. Mead, Dr. Goldsbrough.

June 21st, 1926.—Prof. J. A. Smith in the Chair. Mr. Cecil Brock : “Implications of the Philosophy of Bergson.” Discussion : Prof. Smith, Mr. Hannay, Prof. Carr, Mr. Mead, Mr. Cator, Mr. Rostrevor Hamilton, Dr. Thomas, Dr. McGovern.

JOINT SESSION WITH THE MIND ASSOCIATION AT
TRINITY COLLEGE, CAMBRIDGE.

First Session : July 2nd, at 8 p.m.—Prof. H. Wildon Carr in the Chair.—Address by Prof. W. R. Sorley : “ Fifty Years of ‘ Mind ’ .”

Second Session : July 3rd, at 10 a.m.—Prof. C. D. Broad in the Chair.—Symposium : “ The Nature of Sensible Appearances.” Prof. G. Dawes Hicks, Mr. H. H. Price, Prof. G. E. Moore, Miss L. S. Stebbing. Discussion : Prof. Broad, Mr. Anderson, Prof. Carr, Prof. Lovejoy, Mr. Hannay, Prof. Stocks, Mr. Hooper, Mr. Cooper, Prof. Alexander.

Third Session : July 25th, at 2 p.m.—Prof. Alexander in the Chair.—Symposium : “ The Place of Mind in Nature.” The papers were written by Prof. L. T. Hobhouse, Prof. J. A. Smith and Prof. G. C. Field, none of whom were able to attend. The papers were therefore summarized by Prof. C. D. Broad, Prof. Wildon Carr and Prof. Dawes Hicks. Discussion : Prof. Alexander, Prof. Lovejoy, Prof. J. S. Mackenzie, Mr. Anderson, Dr. Ivy Mackenzie.

Fourth Session : July 25th, at 8 p.m.—Prof. G. E. Moore in the Chair.—Symposium : “ Universals and the Method of Analysis.” Mr. H. W. B. Joseph, Mr. F. P. Ramsey, Mr. R. B. Braithwaite. Discussion : Prof. Moore, Mr. Wright, Prof. J. S. Mackenzie, Mr. Anderson.

Fifth Session : July 4th, at 2 p.m.—Prof. G. Dawes Hicks in the Chair.—Symposium : “ The Notion of Emergence.” Dr. E. S. Russell, Mr. C. R. Morris, Sir W. Leslie Mackenzie.

Discussion : Prof. Dawes Hicks, Prof. Granger, Prof. Alexander, Dr. Broad, Mr. Cooper, Miss Oakeley.

Sixth Session : July 4th, at 8 p.m.—Prof. W. R. Sorley in the Chair.—Symposium : “The Validity of the Concept of a Personal God.” Prof. J. L. Stocks, Dr. C. D. Broad, Prof. W. G. de Burgh. Discussion : Prof. W. R. Sorley, Prof. J. S. Mackenzie, Mr. Ramsey, Prof. Wildon Carr, Prof. S. Alexander.

LIST OF OFFICERS AND MEMBERS FOR THE FORTY-EIGHTH SESSION, 1926-1927.

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1899. Sir ROBERT ARMSTRONG-JONES, M.D., 9, Bramham Gardens, S.W. 5.
1913. Rev. FRANCIS AVELING, D.D., Ph.D., D.Sc., 8, Thayer Street, W.1.
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1915. F. C. BARTLETT, B.A., Turfcoats, Storey's Way, Cambridge.
1919. ROBERT J. BARTLETT, 3, Eastcote Road, Harrow, Middlesex.
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1924. RALPH BATES, 15, Dowling Street, Swindon.
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Castle, Gold Coast Colony, B. West Africa.
1913. Col. E. H. BETHELL, Beech Hill, Englefield Green, Surrey.
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1888. H. W. BLUNT, M.A.
1921. Prof. J. E. BOODIN, M.A., Ph.D., Carleton College, Northfield,
Minnesota, U.S.A.
1924. Mrs. M. BORWICK, School House, Clifton College, Bristol.
1925. G. C. BOSANQUET, The Dutch House, Sevenoaks, Kent.
1919. W. R. V. BRADY, B.A., 34, Kingsmead Road, Tulse Hill, S.W. 2.
1924. Prof. G. S. BRETT, The University, Toronto.
1919. W. O. BRIGSTOCKE, B.A., Armstrong College, Newcastle-on-Tyne
1914. C. D. BROAD, M.A., D.Litt., Trinity College, Cambridge.

Elected.

1924. F. H. CREIL BROCK, M.A., 30, Glenlyon Road, Eltham, S.E. 9.
 1908. WILLIAM BROWN, D.Sc., M.D., 34, Hyde Park Gate, S.W. 7.
 1922. Prof. WM. ADAMS BROWN, Ph.D., D.D., 49, E. 80th Street, New York.
 1919. J. BUTLER BURKE, M.A., Royal Societies Club, St. James's Street, S.W. 1.
 1921. L. D. BURLING, 47, Parliament Street, S.W. 1.
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 1920. Prof. MARY WHITON CALKINS, Wellesley College, Wellesley, Mass., U.S.A.
 1918. Prof. E. T. CAMPAGNAC, M.A., Greengate, Dingle Lane, Liverpool.
 1881. Prof. H. WILDON CARR, LL.D., D.Litt., *Vice-President and Editor*, 405, W. Adams Street, Los Angeles, California.
 1924. Dr. CARLOS CASTANER, c/o The Anglo-Spanish Society, 5, Cavendish Square, W.
 1921. WILLIAM CATMUR, 23, Terrace Road, South Hackney, E. 9.
 1918. GERALD CATOR, 83D, Lexham Gardens, W. 8.
 1923. W. S. CHANG, D.Phil.
 1924. V. G. CHILD, M.A., 34, Cartwright Gardens, W.C. 1.
 1908. E. C. CHILDS, M.A., 6, Cambridge Park, Redland, Bristol.
 1924. JAROSLAV CISAŘ, Ph.D., Czecho-Slovakia Legation, 8, Grosvenor Place, W. 1.
 1918. Miss M. E. CLARKE, M.A., 39, West Street, Northampton, Mass., U.S.A.
 1920. Miss H. CLERGEUE, Albemarle Club, 37, Dover Street, W. 1.
 1912. Prof. ALBERT A. COCK, B.A., University College, Southampton.
 1907. F. J. O. CODDINGTON, M.A., LL.M., 42, Bank Street, Sheffield.
 1895. STANTON COIT, Ph.D., 30, Hyde Park Gate, S.W. 7.
 1913. G. D. H. COLE, M.A., 8, Holywell, Oxford.
 1921. R. G. COLLINGWOOD, M.A., Pembroke College, Oxford.
 1920. F. C. CONSTABLE, M.A., Grenville, Lansdown, Bath.
 1925. R. F. COOPER, 31, Westbourne Terrace, Hyde Park.
 1920. F. C. COULTER, M.A., Stapleton's Chantry, W. Moreton, Wallingford.
 1922. F. G. CROOKSHANK, M.D., 41, Wimpole Street, W. 1.
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 1917. Right Rev. C. F. D'ARCY, D.D., Archbishop of Armagh, Primate of Ireland, The Palace, Armagh.
 1920. Prof. S. N. DASGUPTA, M.A., Ph.D., Chittagong College, India.
 1912. Prof. WILLIAM L. DAVIDSON, M.A., LL.D., 8, Queen's Gardens, Aberdeen.
 1916. Rev. A. E. DAVIES, M.A., 14, South Parade, Whitley Bay, near Newcastle-on-Tyne.
 1923. Prof. W. G. DE BURGH, M.A., 2, Southern Hill, Reading.
 1922. A. O. DELO-DOSUMER, M.A., c/o Harrod's Stores, Knightsbridge, S.W. 1.
 1896. E. T. DIXON, M.A., Buly Dun, Half-Way Tree, Jamaica.
 1924. J. L. DIXON, The Penn Club, 9, Tavistock Square, W.C.
 1924. Judge H. C. DOWDALL, M.A. Melfort Cottage, Boar's Hill, Oxford.
 1924. Rev. RICHARD DOWNEY, D.D., The Mission House, Brondesbury, N.W. 2.
 1918. Rev. JOHN DRAKE, M.A., B.D., Serampore College, Bengal.

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 1898. Prof. ROBERT LATTA, M.A., D.Phil., The University, Glasgow.
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 1924. F. J. MCCULLOCH, B.A., Fireroft, Bournville, Birmingham.
 1918. WM. MONTGOMERY MCGOVERN, Ph.D., School of Oriental Studies, Finsbury Circus, E.C. 2.
 1899. J. LEWIS MCINTYRE, D.Sc., Abbotsville, Cults, N.B.
 1921. J. C. MCKERROW, 34, Cartwright Gardens, W.C. 1.

Elected.

1914. G. R. S. MEAD, B.A., 27, Clareville Grove, S.W. 7.
 1925. Miss A. MEADE, B.A., Bedford College, N.W. 1.
 1920. E. MILLER, M.A., 33, Oxford Mansions, Oxford Circus, W. 1.
 1889. R. E. MITCHESON, M.A., Les Iris, Roquebrune, Alpes Maritimes, France.
 1921. WALTER H. MOBERLY, M.A., The University, Manchester.
 1923. Miss G. V. MOFFAT, B.A., Latymer School, Edmonton.
 1923. Prof. W. P. MONTAGUE, M.A., Ph.D., Columbia University, New York.
 1919. Rev. WILFRED MOOR, B.A., Ph.D., Piazza Minerva 74, Rome (19).
 1896. Prof. G. E. MOORE, Sc.D., LL.D., *Vice-President*, 86, Chesterton Road, Cambridge.
 1915. Mrs. G. E. MOORE, 86, Chesterton Road, Cambridge.
 1920. Mrs. VERA A. MOORE, M.A., Whyrbush, Burke Road.
 1924. B. G. MORANT, 15, Chester Terrace, Eaton Square, S.W. 3.
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 1910. Prof. C. LLOYD MORGAN, LL.D., *President*, 5, Victoria Square, Clifton, Bristol.
 1923. C. R. MORRIS, M.A., Balliol College, Oxford.
 1924. Prof. DAVID MORRISON, M.A., 23, South Street, St. Andrews.
 1925. J. NEEDHAM, M.A., Caius College, Cambridge.
 1923. THOMAS MATHESON NESS, M.D., 99, Bedford Court Mansions, W.C. 1.
 1922. Mrs. NIEDZWIECKA-OSSOWSKA, Ph.D., Wspólna 10 m.31, Warsaw.
 1925. F. R. NOTT, J.P., LL.B., 11, Raeburn Close, Hampstead Garden Suburb, N.W. 1.
 1904. Prof. T. PERCY NUNN, M.A., D.Sc., *Vice-President*, London Day Training College, Southampton Row, W.C. 1.
 1908. Miss HILDA D. OAKELEY, M.A., 27, Gordon Square, W.C. 1.
 1918. Mrs. HERBERT J. PAGE, 97, Cadogan Gardens, S.W. 3.
 1919. HERBERT J. PATON, M.A., Queen's College, Oxford.
 1926. R. L. PATTERSON, M.A., 65, Wimpole Street, W. 1.
 1923. F. G. PEARCE, 460, Fulham Road, S.W. 6.
 1922. CAMILLO PELLIZZI, LL.D., 22, York Buildings, Adelphi.
 1924. JOHN EVANS PHILLIPS, B.A., B.Sc., 114, Sternhold Avenue, S.W. 2.
 1921. Rev. RICHARD PHILLIPS, M.A., D.Ph., D.D., St. John's Seminary, Womersley, Guildford.
 1916. W. A. PICKARD-CAMBRIDGE, M.A., Worcester College, Oxford.
 1918. GEORGE PITT-RIVERS, Hinton St. Mary, Dorset.
 1917. Hon. ELEANOR M. PLUMER, M.A., Mary Ward Settlement, Tavistock Place, W.C. 1.
 1923. Mrs. PORTAL, Bere Hill, Whitechurch, Hants.
 1921. Rev. W. POWELL, M.A., B.D., "Benslow," Broomfield Lane, Palmers Green.
 1922. HANS PRESSBURGER, Ph.D., University College, W.C. 1.
 1924. H. H. PRICE, B.A., B.Sc., Trinity College, Oxford.
 1913. Prof. A. S. PRINGLE-PATRISON, LL.D., D.C.L., 16, Church Hill, Edinburgh.
 1916. Miss M. PUNNETT, B.A., *Librarian*, London Day Training College, Southampton Row, W.C. 1.

Elected.

1926. Prof. ALFRED O. RAHILLY, Registrar's House, University College, Cork.
1922. M. B. RAY, M.D., 6, Bentinck Street, W. 1.
1924. Miss E. C. RECKITT, 9, Old Square, Lincoln's Inn, W.C. 2.
1922. LOUIS ARNAUD REID, M.A., Ph.D., The University, Liverpool.
1918. Prof. H. MAURICE RELTON, D.D., The Vicarage, Isleworth.
1918. C. A. RICHARDSON, M.A., Willow House, Whalley, Blackburn.
1925. W. A. RICHARDSON, B.A., University College, Nottingham.
1921. Mrs. RIDDEL, 15, Mount Street, W. 1.
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